

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XXIV

SEPTEMBER - OCTOBER, 1922

No. 5

Stories from Birdcraft Sanctuary

By MABEL OSGOOD WRIGHT

II. THE RIGHTS AND WRONGS OF BIRD-TRAPPING

IT IS one thing to set apart a piece of land and call it a 'Wild-Bird Sanctuary' and quite another to make it justify the name. Unless this land be guarded against enemies, both human and wild, either by a fence difficult to climb or by a constant intelligent patrolling by a man with a keen eye and steady aim, the very means taken to attract birds in unusual numbers is sure to be followed by a great increase in the dangers that beset bird-life.

The first half-year at Birdcraft was quite enough to convince us that the making of a sanctuary must be a militant rather than a peaceful process, and our first step was to obtain permission from the State Fish and Game Commission to destroy any form of wild life that should prove detrimental to the object for which the place was developed.

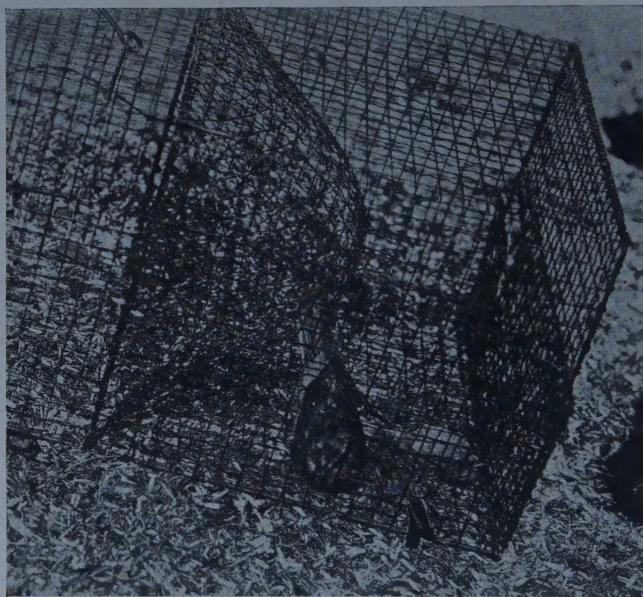
The list of the forbidden reads as follows: cats, weasels, rats, Crows, Cooper's and Sharp-shinned Hawks, Shrikes, Jays (when they start to break up nests), and red squirrels; also, the two alien enemies, English Sparrows and Starlings. Yes, the Starling, the bird of poets, a feature of the English downs, where they hover over the flocks of grazing sheep, whistling melodiously as they either follow them or alight upon the backs, deep in wool, to pick off the tormenting ticks. Our Biological Survey also maintains the Starling's excellence by stomach analysis, nevertheless, to the country lover and songbird protector, this bird is *oban*. For does he not devour the food of our native birds, especially in winter, but also fights with them in the nesting season and wrecks the nests and kills the young of species as large as the Robin? Does he not give a false alarm of spring, when we are awaiting the Redwing? an ethical crime in itself.

If the English Sparrow was a menace, the Starling is an accomplished cut-throat, and whatever he may be at home, or whatever his stomach contents may prove him to do from a hard and fast scientific viewpoint, in and about Birdcraft he is a Bolshevik. In one afternoon a flock stripped the berries

from two enormous pepperidge trees that would otherwise have yielded our native birds a month's rations.

Shooting, at wide range, was too risky, so the warden soon put in use a crude but effective trap—a large box with a hinged cover, held partly open by a stick to which a stout string was attached. This string ran in through the workshop window. The trap was baited with garbage and the Starlings did the rest.

The English Sparrows, with a longer criminal experience, were, of course, more wary. We bought an approved Sparrow trap, baited it, and waited. It was well that the Warden also *watched*, for an unwatched Sparrow trap can inflict much misery and destruction upon its inmates, as the tempting



NORTHERN SHRIKE AND TWO SPARROWS IT KILLED IN THE TRAP

seed-bait lures both the just and unjust. Among the birds caught the very first season were Song Sparrows, Juncos, Field Sparrows, White-throats *galore*, as well as Towhees, and even a Thrasher.

For a few minutes the trapped bird is unafraid and engaged in feeding, but as soon as there is a general fluttering among the inmates, the birds begin a dash for freedom, and unless the trap is visited, the detrimental birds removed and the rest set free, broken feathers and bleeding, battered heads result; and an all-night neglect of the trap, in even moderately cold weather, will show a pitiful array of little stark bodies next morning. At times such a trap is a necessity, but at best it is one of the greatest responsibilities of the Warden.

For this reason the use of the trap in the new general experiment of bird-banding should be very carefully considered. The banding of adult birds, if

carefully done by responsible people, and the traps often emptied, is in no wise detrimental. *We never band nestlings*; it is not our idea of perfect bird protection to in any way tamper with young birds. Our Warden has banded adult birds without causing them to become even disturbed. In one day he caught one Junco seventeen times and a Tree Sparrow seven times—the trap seeming to have a hypnotic effect upon them, for there was plenty of similar food outside. But this indicates a very careful watching of the trap, and here is another side, showing what could happen in an unwatched trap.

Shrikes were very plentiful in the Sanctuary last winter, eighteen having been shot by the Warden, in every instance taken in the act of harrying a song-bird. In March, the Warden being at work in his shop, saw the shadow of a Shrike dash by. Seizing the gun kept for the Sharp-shinned and Cooper's Hawks and going out, he saw the Shrike make a lunge at a Sparrow in the trap. Before he could reach it, the Shrike had entered the trap, killed a Junco and a Sparrow before he could be taken and would have doubtless made short work of the other eight imprisoned birds. Shrikes had harried birds all winter, chasing a Chickadee round about the bushes, in and out of the shelters, one coming into the Warden's hands by striking the fence wire, but the invasion of the trap seems the last word in daring.

The two bad Hawks, Sharp-shinned and Cooper's, always make a spring drive, and last year a baker's dozen of Sharp-shinned were taken. The Crows are perennial, but only to be disturbed in the season of eggs and squabs; a poisoned egg well secured in a dead tree is one remedy—a just sentence for egg-thieves—for whatever virtue the Crows may possess in the wide open spaces—and they have a certain picturesque beauty in the autumn and winter landscape—in the garden, or bird-refuge, the birds themselves will tell you, in no uncertain way, how they are feared.

More than once I have had a poor mangled Robin squab, fall, upon my head, from the beak of a startled Crow. When we attempt to coöperate with nature, and no less interfere with her processes, we assume a wide responsibility. A bird sanctuary is certainly coöperation, and as surely a responsibility, for even with the greatest care we sometimes seem to bend the axle of the great balance-wheel and something is upset.

Friends, do not undertake the making of bird-refuges unless you are prepared to do more than post a piece of land and scatter a little food, *once in a time!* Also do not put out Sparrow traps either for purposes of banding birds in general or catching English Sparrows *unless someone can watch them constantly, and someone who knows the species of Sparrows apart.* Better it is to let the alien Sparrows fight it out with their kin than that they should all die in a trap, for, at the worst, the Sparrow menace is lessening and the sturdy little brown gamin is following the horse toward the setting sun!

A Vireo as Hostess

By ERNEST HAROLD BAYNES, Meriden, New Hampshire

Photographs by the Author

Copyright by Ernest Harold Baynes

IF ONE makes a practice of extending hospitality to the birds, by giving them food and water and nesting-sites, and by protecting them from their enemies, it is easy to have hosts of acquaintances among the feathered folk.

For years it has been a very common thing for us to have birds of many species come to our window-sills to be fed and to have several species alight upon our hands and arms and even upon our hats and ears and lips. My wife and I have sat in the snow with a hundred birds swarming over us and the ground about us, some of them creeping inside our outer coats and into our loose pockets in search of the food we carried for them. They even permitted us to pick them up in our hands. But, after all, most of these we regarded more as delightful acquaintances rather than intimate friends.

Now and then, however, a bird will "take you into the family" so to speak. When this happens make the most of it. It will be a delightful, perhaps wonderful, experience, and probably you will never again have another exactly like it even if you live to be very old.

I had such an experience recently in my home village, Meriden, N. H. One day, near the middle of last June, a lady visiting the Bird Sanctuary, called my attention to the almost completed nest of a pair of Red-eyed Vireos in a small maple tree not far from the main foot-path. A few days later when I went to visit it I found it complete—the typical deep little basket made chiefly of strips of bark and grasses, suspended from a forked twig about five feet from the ground. Next day there was an egg in it, white, with black and reddish brown spots.

Two or three days later when I approached the nest the female was sitting on it, while her mate in a nearby maple grove continually called attention to his presence by short, precise, and quickly delivered sentences.

I knew that Vireos have the reputation of being willing to meet one half way in the matter of making friends, so I decided to make an advance. First I went to a dry and sandy spot where I turned over large stones until I found some ants' eggs. Then I selected a dead weed-stalk about five feet long and impaled an ant's egg on the sharp end of it. With this I very quietly approached the nest and held out my offering at arm's length, until the white morsel was within reach of the Vireo. At first she looked alarmed, then astonished, and a moment later rather bored, for she turned her head away and refused to look at the proffered food. But I waited patiently, holding the tip of the weed-stalk within easy reach. At last she turned her head as if the temptation to do so could no longer be resisted. She now showed keen interest in the proceedings, took a sharp look at the white delicacy at the end of the stalk and

then as much as to say, "Hello; that *is* an ant's egg, isn't it?" stretched out her neck and took it. For a moment she held it, rather doubtfully, it seemed, in the tip of her bill, but presently she swallowed it, and then settled herself very contentedly in the nest, with the air of one whose final decision had been fully justified. It was not necessary to be an ornithologist to understand that she thoroughly enjoyed that ant's egg, and she also had the appearance of one whose mind had been set at ease on a very important question.

A moment later she confirmed her own opinion by taking another ant's egg in the same way, after which I quietly withdrew, leaving her to digest both her food and her strange experience.

Next day I returned and after she had promptly accepted a few more ants' eggs from the end of the weed-stalk, I stepped up a little closer and offered



"HELLO! THAT IS AN ANT'S EGG, ISN'T IT?"

one between my thumb and forefinger. After a little hesitation she took it, and from that moment we were on friendship's footing. She seemed much interested, if not actually pleased, whenever I approached; she would sometimes stretch far out over the rim of the nest in order to make quick connections with the food I brought her, and did not mind in the least if I stroked her on the head or back with my finger. At first she was a little nervous when I stroked her throat, and when I persisted she slipped off the nest. But as she got used to me she minded less and less and would even allow me to lift her off her eggs and put her gently back.

In a day or two I felt sufficiently well acquainted with Madame Vireo to introduce my friends. Usually the introduction came as a surprise. I would

take a friend to the Sanctuary on one pretext or another, and when we were near enough to the Vireo home, I would point the bird out and make a formal introduction: "Madame Vireo, allow me to present my friend, Mr. Hunter." Whereupon Mr. Hunter would approach, and, after making an offering of an ant's egg or two, would almost literally shake hands with the lady. Many



ONE OF MY FRIENDS MEETING MADAME VIREO

people were introduced in this way, and children especially experienced ecstatic joy at the privilege of feeding and stroking a wild bird in her own home.

One warm afternoon when some of us were paying her a visit, the little Vireo slipped away for a few minutes, and, flying to a bird-bath not far away, took a bath and returned, looking much refreshed and with her plumage damp and somewhat disarranged. Very soon she flew to the nest and looked rather astonished, I thought, to find my hand covering the little home. But she was not in the least afraid, and, forcing her way between my slightly parted fingers, went onto her eggs in the dark.

Presently she went away again, and again I put my hand over the nest, this time with the fingers pressed firmly together. When she returned she flew boldly up to me, but, find-

ing that she could not get between my fingers, she hopped over the back of my hand, along my arm to the shoulder, and then flew to a nearby twig where she sat and scolded in a tone which left no doubt as to her opinion of me. Her mate, who had been busy preaching in a large maple tree, now joined her, and gave me to understand that he entirely agreed with her. Of course, I apologized and removed my hand and back she came and took up her domestic duties. No doubt it was pure imagination on my part but it seemed as if she looked at me with just a touch of self-satisfaction at having gained her point.

In order to photograph her I temporarily tied back the leaves which shaded

the nest, and as I sometimes used a mirror as well, the light at times must have been very dazzling. She would stand it a little while and then she would abruptly turn her back to the light and to the camera as much as to say "Now you may go ahead and do anything you like."

One hot day while I was photographing it was plain to see that she was feeling the heat very much and she sat with her bill parted as birds often do in warm weather. I sent a friend to a nearby bird-bath for water and offered her some in a spoon. She sipped it readily, and when she had had all she wanted she became very much interested in the shining spoon. She pecked at it, then turned it over and spilled the remaining water onto the ground, peering curiously over the edge of the nest as if to see where it fell. Then while I held the handle of the spoon, she took hold of the bowl of it with her bill, slid backward off the nest onto the branch which held it and deliberately played tug-of-war with me. Finally she became so excited that still holding onto her end of the spoon, she flew into the air and would doubtless have carried off the shining prize if she had been strong enough.

These pleasant experiences continued for several days, and I was looking forward eagerly to the time when Madame would introduce me to her babies. But, alas, one morning when we reached the nest we found it torn and deserted. Only one egg remained and next day this one too had disappeared. Probably it was the work of a Blue Jay or a Crow, a sad termination of a delightful friendship.



I OFFERED HER SOME WATER IN A SPOON

Koo

By FLORENCE MERRIAM BAILEY

KOO; for so the Roadrunner who came familiarly to our tent in southern Arizona named himself by the call with which he usually announced his presence.* He was so surprisingly tame that I asked our good neighbor, the ranchman's wife, if she had been the cause. He sometimes got into her garden, she said, and she would catch him and put him out over the fence. The first time he was terrified and tried to force his way out through the wire mesh, but the next time, having found that she did him no harm, when he saw her coming he ran into a corner of the fence, crouched down, and waited for her, letting her pick him up and submitting quietly while she stroked him.

He was often seen near the ranch watering-tanks and probably got water from dripping pipes. But what did he get to eat? His summer food, such as grasshoppers, crickets, scorpions, centipedes, lizards, and snakes were mostly housed in safe underground quarters for the winter. Mice were still to be had but most of these were nocturnal. He might easily miss a meal.

His first appearance in camp was at a truly psychological moment, for not only did our tent contain cages of numerous live rodents which were being studied by the Mammalogist, but a number of white-footed mice had been caught the night before and were waiting to be disposed of. So, holding up one of the delectable furry morsels for the alert, long-tailed visitor to see, the Mammalogist invited him to the feast. Being treated like a rational personage, Koo, on seeing the mouse coming through the air toward him, instead of running away, frankly accepted the invitation and started toward the mouse, actually walking up within a few yards of his benefactor for it. But with the prize once in his bill, discretion evidently seemed the better part of valor, for, turning tail, with body and tail held at the swiftest horizontal running level, Koo raced up the slope out of sight.

After that, all through January and February, and until it grew warm enough to bring out a goodly supply of lizards, Koo was a frequent and often daily visitor, some days staying around camp a great deal. He would always take small mammals thrown him with avidity, and when two live pocket mice were set free some distance up the trail to test his fleetness and hunting skill, he was off like a flash in pursuit, catching them before they could get to cover. But whatever savage hunting instincts he possessed to flatter us with our evolutionary superiority, his behavior in camp, and it would seem under great temptation, was most exemplary. To be sure, he did take especial note of one of our caged kangaroo rats when it was being photographed in a glass box out-of-doors, taking up his position on a stone close beside us and sitting fluffed up comfortably but betraying expectant interest by certain keen glances and

*As the plumage of the sexes is alike, the determination was arbitrary.

cranings of the neck. Our small diurnal mammals whose cages were taken out into the sunshine in the daytime were safe from him although he was caught regarding an antelope squirrel quite keenly one day in passing. Koo's predilection for scorpions and other 'varmints,' as they are expressively called, might well have made him a worthy camp watchman when those sleepers roused from their winter slumbers. The big hole in the ground in front of the tent which the University entomologist assured us was only that of a near-tarantula—the same size but gray instead of brown—gave point to Koo's possibilities of usefulness. Even a harmless near-tarantula may be an undesirable tentmate to other than an entomologist. And then there was that eight-inch centipede with needles pointing each claw and venomous forceps at its head, met with in the valley, now in the formaldehyde bottle on a shelf of the tent! Surely Koo would be a useful camp mascot when spring came!

But he kept his good deeds to himself until near our departure, when one day he was seen making excited sallies into a dense thicket a few yards from the tent, calling and snapping his bill, his wings and tail showing in frantic, hysterical action in the shadow. After a number of spirited attacks upon the hobgoblin, he appeared to give in and ran up the hill out of sight. The next day a Stephen's Vireo in the mesquite over the spot stopped singing and began to fuss. Then another came, and presently two male Hooded Orioles joined the excited, scolding group, all flying down to the lower branches scanning the ground. Had they discovered Koo's enemy? Focusing my glass on the ground, I discovered a streak of coral slipping over the leaves. At my call the Mammalogist came with his collecting pistol and in a mo-



COMING DOWN TO CAMP

ment more was holding up a beautiful five-foot coral-bellied racer. Koo was vindicated. His warning might as easily have been for the rattlesnake found later a few rods from camp.

But it was not his potential usefulness as a camp watchman or killer of 'varmints' but his ready friendliness and attractive ways which attached us to our rare camp visitor. If we were busy when he came he would call *koo, koo*, and then wait for us to discover him. Sometimes we would look hard before finding him and finally make him out standing on the mesquite slope above us, his feathers puffed out spreading the streaks on his chest till they and his light underparts toned in perfectly with the background of straw-colored ground and dry weed-stalks—completely camouflaging him. It was astonishing to see how such a large, marked bird could disappear in its background. And what a contrast that round, bird-like form made to the grotesque running figure we were familiar with—long neck, slender body, and long tail, one straight line.

When we had found him, most often standing quietly in camp waiting for us, while we were getting his food ready he would come up within a few yards of us and stand nervously raising and lowering his crest, and raising and lowering his tail as if to be ready for instant flight, an instinctive habit he partly lost when better acquainted with us.

When there were no spare mammals in camp to appease his appetite, he condescended to bits of raw beef or jack rabbit, although he greatly preferred his more natural food. Once when he was standing in the trail waiting for his purveyor to lower the meat-bag which, according to custom in arid, iceless Arizona was hung in a tree, Koo, whether from impatience or anticipation spent the time rattling his bill in the droll way he had and giving his call. When food was thrown to him from any distance, the keen-eyed hunter would watch it eagerly and follow unerringly where it fell, whether among the mesquite logs by the camp-fire or overhead among the branches of a tree.

When a stranger came to camp while Koo was there he flattened his crest and lowered his tail and scooted, racing away out of sight. But he knew us and our voices. When coming into camp one noon we discovered him disappearing up the trail, but when we called *koo-koo* in appealing tones, he turned and came back in sight rattling his bill. When we kept on calling and talking to him, he came walking prettily down the trail to camp making his way daintily between the piles of camp-fire brush till he was so near we could see his yellow eyes, when he picked up the rabbit kidney thrown him and ran up the hill with it.

When he was hungry and we were not outside, he would sometimes fly up to the crotch of the mesquite by the tent where we kept his mice, or even on the tent itself, when we could see his shadow on the canvas. The first time I saw him trying to help himself; it had been cold and he had not been fed for a day and a half, so I hurried out to him. At sight of me he gave his tail a quick

sideways toss which I interpreted as "Oh, there you are! Now I'll get something to eat."

While I was getting his lunch and talking to him he stood with a pleased and not-at-all nervous air looking up at me. Holding out his food I called coaxingly and he came nearer and nearer until I could see not only the handsome bluish black of his crest but the pink of the streak over his yellow eye. Quite different he seemed from the sandy-and-brown streaked bird so well camouflaged when standing on the mesquite slope. But the beautiful green sheen of his tail seen sometimes as he ran was not noticeable now. Such a decorative, cuckoo-like fan is not always kept tightly closed and may well play an important part, as has been suggested, in courtship display.

While Koo and I were regarding each other in friendly fashion, and I was coaxing him to come still nearer, with a pretty turn he lowered his head, puffed out his throat and emitted his strange guttural note. Was it a coy way of begging for favors in the manner of a trick dog, or was it just a sign of intimate friendliness? Be that as it may, as our bird became more and more at home with us, in choice, as it were confidential moments, he frequently went through with this same pretty play.

A familiar habitue of camp, if we were in the tent when he came he proceeded to look for us, often surprising us by peering in under a raised tent flap. He was photographed at such a time from inside when standing only six feet away, back to the sun, and feathers bristled up all over his body.

Koo was not usually an early visitor, but one morning when the tent door was opened he was found standing outside waiting for breakfast. As we had nothing especial for him at the moment, I went on with my morning's camp work, leaving the door open and paying no more attention to him. When something called me outside, to my surprise, out of the door ahead of me ran Koo! Had he taken the opportunity to examine the cages of small mammals? If so, he may well have found it an interesting interior.

Whenever, perhaps by reason of an awakening warm wave, Koo failed to come regularly for his meals, we thought anxiously of feathers of dead Road-runners found up the canyon and of shots heard from his route, for he had become such an accepted camp mascot that we missed him sadly. After one such unhappy interval I suddenly heard his voice and looked up to discover him standing quietly waiting as was his wont after announcing his arrival. I called out an eager welcome and the Mammalogist, equally glad to see him, hurriedly threw him a pocket mouse that had been waiting for him, such a big one that he had to gulp hard to even partly swallow it and had to leave the tail sticking out of the side of his bill for some minutes. In the afternoon he was back for more, however, as if his prolonged hunting expedition had left him hungry, this time coming within two feet, almost to the hand for a small kangaroo rat.

The first week in February Koo appeared on the trail above the tent with

a companion. He stayed to be talked to as usual but the stranger ran off. From that time on there seemed to be a difference. Koo was not getting sentimental, but spring was coming.

One morning when the Mammalogist was several rods from camp near what we took for a last year's Roadrunner nest, he heard a faint footfall on a leaf on a terrace below him and caught sight of Koo's crested head bobbing as he



KOO IN A HACKBERRY TREE

trotted along. Being called, Koo stopped, turned, and came right up the trail in the direction of the sound, and when he had skirted around the bushes until he was able to see his old friend, he began making a new and curious note—low, sibilant, and seething, suggestive of a courtship call. He kept this up when he had seated himself on a branch two or three feet above the ground, and humped up, with feathers loosely ruffled, facing the old nest, had all the intimate suggestion of being at home.

After that, Koo not only recognized his friend when met with in this neighborhood but when called, actually followed him like a little dog back down the trail to camp for food.

As the two birds stayed in the neighborhood for a few days, we hoped that we were going to have a nest under close observation, but then they both deserted the old nesting-ground.

About the first week in March it grew warm enough to rouse some of the lizards and we were away a great deal working in the lower country, so the comrades went farther afield for their hunting.

But again, about April 1, low *koos* were heard not far from camp and glimpses were caught of—was it Koo looking across the gulch at us? The low, familiar snapping of the bill was also heard and once a level streak was seen disappearing under the mesquite—Koo's mate?

After another long interval in which we vainly looked and called and called and looked for our mascot, his familiar notes were heard rather near camp. Soon after, one morning before the tent door was open, we heard what was recognized as the Roadrunners' spring love-song. It was given near enough the tent for us to catch its vibrant, emotional tones. It was the ordinary *koo* note sublimated, repeated rapidly and with fervor. From across the gulch came the answer, and we knew that Koo had left his strange human friends to answer the primordial call of his own race.



LARK SPARROW ON NEST
Photographed by Dr. A. H. Cordier Olathe Kans.

The A. M. S.* Robins

By O. C. WOOD, Denver, Colo

With Photographs by the Author

THIS story has to do with two pair of Robins that made their home close to the Agnes Memorial Sanitarium, where they were a delight to the patients. One pair built their nest in a small pine about fifty feet from my porch, and not over four feet from the ground. I had this nest under observation at all times. The other pair built their nest on the other side of the pavilion, on a box intended for House Finches, and which was tied to a porch column. The fact that beds were occupied on the porch throughout the day and people coming and going close at hand did not disturb the Robins during building operations or later.

The first nest, in due course of time, had three eggs and the second nest had four eggs. Fortunately, as it proved, I knew that incubation began at both nests within twelve hours of each other.

Had Mother Robin of four eggs not been so trustful of all human beings and gone farther afield to get her evening meal she might not have lost her life. But she ran afoul of a thoughtless, heartless creature with a gun and here ensued the first tragedy among our Robins. I knew of the killing in a short time after it occurred. Then the question came to me, Will Cock Robin assume the responsibilities of the household? I was convinced in a short time that he could not be depended upon. Whether or not he knew of his mate's death, he at least knew that she was absent from her post of duty, and was calling for her from various points of vantage.

I decided to try an experiment and took the nest and transferred all four eggs to the other nest in the pine tree with its original three eggs, taking care not to touch the eggs with my hands. Mother Robin flew a short way off while the eggs were being placed in the nest, but as soon as I walked away a short distance, she came back, cast a few inquiring glances at a more than doubled clutch of eggs, settled herself on them apparently contented.

Instead of her three prospective progeny, Mother Robin now faced the possibility of seven. And seven young Robins hatched in three days from the time the extra eggs were placed in the nest. Six of the eggs hatched within so many hours of each other, the seventh egg about twelve hours later, a circumstance which doubtless made this bird the weakling of the brood.

Now Cock Robin enters the scene and shares responsibilities. Heretofore he spent part of his time in the top of a tall tree, calling his cheery song to his mate on the nest and the world in general, and part of his time he spent picking up choice worms at his various meal-times. However, I did not see him take a worm to his mate at the nest; he allowed her to find them for herself.

*Agnes Memorial Sanitarium, Denver, Colo.

I do not believe there ever was a busier or apparently a prouder pair of Robins. They played no favorites; probably they were obliged to feed all seven fledglings to make sure their own blood relatives were fed. At least they did a good job, and those seven young Robins, with exception of the weak one, grew as only young Robins can.

It was soon evident that the nest would not long accommodate such a large family. I wanted to see them all live and thrive so I devised ways and means to relieve the congestion. At first, the extra nest was placed beside the overcrowded home and three young birds were put in this nest during the daytime but all were put in the one nest for the night. All were fed during the day as regularly as the young in the Robin's own nest, but the mother would brood only the young in her own nest.

By keeping accurate count one evening I observed that the Robins carried seven worms, giving the nest with four birds four worms and giving the nest with three birds three worms. This feeding period was well defined each day, and I am sure I counted all the worms carried. I was anxious to know if each bird received food in turn but was unable to determine that definitely. However, I believe they did from the fact that seven worms were carried and that the correct division was made between the two nests.

After two days I could no longer get the young all in one nest for the night. On the third night I kept three of them in my room and decided that the next day I would use the two nests to make one nest large enough to accommodate the entire family of Robins. While this enlarging operation was going on, the Mother and Cock Robin entered vigorous protest, but after placing all the young in the now one big nest, the Mother Robin flew down while I was close at hand, made some hasty examinations then flew off, called Cock Robin and they proceeded to feed the hungry fledglings.



A FOOD-CALL

I wish all bird-lovers might have been privileged to observe the growth of these fledglings and the care bestowed by the parents and foster parents of them. The young birds would take worms from my hands but when I first tried to feed them they appeared afraid and tried to get as near the bottom of the nest as possible. On one occasion I left some worms in a little soil in a box lid close by the nest. The old birds found the worms at once and made a meal on them, but never one of these worms did they give the young.

It was evident that the young would soon leave the nest for they had begun

to raise up in the nest and flutter their wings. As this had been such an unusual experience with bird-life for me, I wanted some permanent record of it. The enclosed pictures are the result. I took them while the birds were being fed, standing not more than four feet from the nest and using the Kodak bulb.

With all the care exercised and the young almost grown, I was not privileged to see them fly, for on the evening of the same day the pictures were taken, a black shadow stole across the lawn, unseen in the dusk of evening, a commotion arose at the nest in which Mother Robin began a frightened calling, to be joined at once by Cock Robin. I knew a marauder was at work. Quickly as possible I was at the nest, but in the space of one minute the nest had been emptied and I found two live Robins on the ground, one the weakling, and three dead ones; the cat had taken



A BUSY ROBIN

another young one for her evening tidbit. Later I saw to it that she paid the penalty.

For two nights I kept in my room the young birds that escaped the raider, and put them out in their nest in the morning. It was a pitiful call Mother Robin gave as she perched on the top of her pine tree home the morning after the cat raided her nest. She begun calling *where, where* as soon as it broke day.

The weakling of the brood had survived up to this time but now died, leaving but one fledgling out of seven hatched; the lone one to fly away.

The Mating Antics of the Pacific Nighthawk

By MABEL A. STANFORD

With Photographs by Wright M. Pierce

THE mating antics of the Pacific Nighthawk are unusual and interesting. This bird, which lives in British Columbia, Alberta, Washington, and many western states, migrates from Colorado to Nicaragua and is found in southern California from May to August. It has one or two unusual tricks to lure the intruder from its marbled eggs and fuzzy, camouflaged young.

The scientific name is interesting in relation to the bird's mating habits. Besides the name for Nighthawk, it contains the words which mean a stringed



YOUNG NIGHTHAWK NEARLY FLEDGED

Photographed by Wright M. Pierce, Claremont, Calif.

musical instrument and evening. The whole name is a large one for such a compact bird, with its long, slender wings and its brown, gray, and tawny coloring—*Chordeiles virginianus hesperis*. Popularly, the eastern Nighthawk, to which this species is closely related, is known as the 'Bullbat' because of its peculiar, booming, nasal utterance.

During the mating and nesting season, the Pacific Nighthawks, which forage in bands at twilight and early morning (even later in cloudy weather)

for injurious insect pests, fly high in the air, uttering their nasal *pée-ark* and executing a peculiar trick for certain members of the band. At the same time they utter a booming sound which attracts the attention of the others.

The sight of this curious acrobatic courting is more vivid than the usual twittering and cooing maneuvers of other birds. In the mountains of southern California, in July, 1921, an incident took place which illustrates this admirably. Just at twilight, eight birds flying together seemed to be sporting about in the air, continually uttering their nasal *pée-ark*. Suddenly one would fly



ADULT PACIFIC NIGHTHAWK ATTEMPTING TO ATTRACT ENEMY FROM HER NEST
Photographed by Wright M. Pierce, Claremont, Calif.

about and then drop with the speed of a rocket toward a lower bird, passing close to it and describing a circle below, giving a loud whiff or boom at the end of its dive.

When this cycle was completed it was repeated again and again, as if the bird were indefatigable in his endeavor to win the attention of the other.

The bird lays its equal ended eggs, with their marble tracery or unusual rings, upon the pepper-and-salt-like gravel of a hillside among the pines and oaks, usually on a few leaves. There she incubates upon them, a still figure indistinguishable, except at close range.

The birds sometimes employ all of the familiar tricks to lure the intruder away from the nesting-place. In one instance the pair detached themselves from the band when danger threatened, fluttering and even flying toward the intruder, uttering the boom note, until the location was passed.

The mother bird tries, of course, to get the enemy to move on or to deceive him. The broken-wing trick is a common one, and closely akin to this is the habit of fluttering and leading the intruder in the opposite direction from the nesting-place. These antics are accompanied not only by the squeaks that other birds use but also by piteous moanings and shrill cries and hisses. The variety of ways with which the bird can attract attention would often make it impossible to find the place where the eggs or birds are, even if they did not have perfect protective coloring.

In Big Bear Valley, Calif., July, 1921, the incident here illustrated took place. When the photographer, Wright M. Pierce, discovered a Pacific Nighthawk and its two half-grown young on the gravel, the bird flushed as soon as he came within six feet. It lit nearby, nearly flattened on the ground, wings outspread, uttering a shrill hiss. The maternal instinct militant made it come toward the enemy to attract attention from the young. It fluttered and continued hissing when he picked up one of the young and even came close, uttering another shrill note. When he released one of the young it ran toward the old bird and then, as the mother seemed satisfied that she had succeeded in deceiving, she flew across the cañon and did not return for fifteen minutes.



CEDAR WAXWING FEEDING YOUNG
Photographed by Joseph Pollak, Carman, N. Y.

Notes from Field and Study

A Plea for the Ruffed Grouse

In notes, April 17, issued by the Division of Ornithology, Department of Agriculture, Boston, Mass., there is an account of serious damage to apple trees by Grouse eating the fruit-buds during the past winter in Massachusetts and New Hampshire. Some trees in western Massachusetts were nearly stripped.

The same thing occurred on the Arrow Lakes, British Columbia, on certain fruit ranches. At Broadwater, on the Lower Arrow Lake, a bunch of eight Grouse were observed for a week in the apple trees. Suspicion being aroused that they were doing harm, six were shot, but the remaining two made good their escape and did not return. The crops of the six shot were stuffed full of fruit-spurs.

When in Victoria on a visit, I took the contents of one crop to the Provincial Museum, and was informed by the Director, Mr. F. Kermodé, that he had never in his experience known Grouse to attack apple trees. On my return I made enquiries up and down the lakes and found that on certain ranches Grouse had done considerable damage, while on others the trees were untouched, though the latter were often surrounded by woods containing Grouse.

In Massachusetts the reason given for this departure from the usual feeding habits of Grouse, were, first, the lack of the usual wild fruits; second, increase in the number of Grouse.

On the Arrow Lakes we had an exceptionally dry summer, which no doubt affected the usual supply of wild fruit and buds on which the birds feed, but the second cause did apply here, for about 1915-16 a disease thinned out the Grouse to an alarming extent, and only this year have they attained to anything like their former numbers.

In discussing the question with 'old timers' they one and all agreed that Grouse, however plentiful, did no damage to fruit trees until

this season. Incidentally, I may remark that I have examined the crop and stomach contents of a goodly number of Ruffed Grouse when they were being prepared for the table, and found they contained wild fruits, buds, and often a quantity of grasshoppers, especially a dark-colored prickly species, which makes a clicking noise in flight, is common here in summer, and goes by the local name of 'locust.'

It is to be hoped that ranchers and others will not wage indiscriminate war on Grouse in and out of season from the one experience of last winter. Not until it can be proved that Grouse have altered their habits, and will continue to do damage, need they be destroyed, and then only those individual Grouse actually invading fruit ranches.

When any damage done to fruit, and the like can be traced to birds, people are only too inclined to wage war against the species implicated, oblivious to the fact that it may be only certain individuals that are doing harm, or that the birds have been forced to alter their habits owing to climatic conditions, and that given normal seasons the same species does good that far outweighs the harm done under abnormal circumstances.—J. E. H. KELSO, M. D., *Edgewood, Arrow Lakes, B. C.*

Birds near Chicago

Trees, feeding-shelves, and drinking-fountains around my cabin in the Dunes attract bird visitors all the year. Occasionally there is one that is rare. For the last three weeks a female Cardinal Grosbeak has been visiting my food-shelves. This week (January 8), a flock of six Bohemian Waxwings were in my tallest perching-tree. They sat there for a long time, preening their feathers and chattering sociably. I was able to get close to them with my glasses and get a fine view with a good light on them. They were larger than the Cedar Waxwing and had the well-defined white marks on wings. Mr.

Burroughs says in "Under the Maples" that a visit from this northern bird indicates a severe winter. However, we had a northern visitor in the Dunes all last winter—the Three-toed Arctic Woodpecker—beginning as early as October 30, when I first saw him, and our winter was unusually mild.

All summer I had a Prairie Warbler and a Black and White Warbler singing in my perching-trees. They evidently nested near, judging from the activities of both the males and females in gathering food.

I mention them because they are not common summer residents in this section. There were plenty of the more common birds, from the House Wren, nesting in a bird-house, to the Great Horned Owl, perching in the very top of the tallest tree.

A Bewick's Wren made us a call in passing, and sang beautifully near our door.—
LILLIAN CRAMP, *Chicago, Ills.*

Evening Grosbeaks in Illinois

My neighbor's garden runs down toward a small creek. Along this creek are low willows, small box elders, and other small bushes. I visited this place every day, if possible, to watch the migration of birds.

On October 15, 1921, I went down about 7 o'clock and discovered the place to be full of birds. I saw the Purple Finches, that I had discovered there the week before, and Myrtle Warblers, both Ruby- and Golden-crowned Kinglets, a Brown Creeper, a White-breasted Nuthatch, a young Rose-breasted Grosbeak, a Song Sparrow, a flock of White-throated Sparrows, some Juncos, a pair of Chickadees, and a few Fox Sparrows.

I was just about to leave the place when I saw in the tops of the trees across the creek, some birds with black and yellow and white markings. Their call was similar to that of the Robin. At first, they were too far away to get distinct markings, but after a little while, they flew directly in front of me and began feeding on weed seeds and in the box elders. They proved to be Evening Grosbeaks. There were about a dozen in the flock, some of them females or young. I watched them feeding until a shower drove me away, but about noon the sun came out

again, and I found the Grosbeaks up in the garden, feeding in the raspberry bushes and on some elder berries along the fence. They did not seem to take any notice of me and I watched them until they flew away across the creek.

I looked for them every day after that, but did not see them again until October 24. They were here then for just one day, and there were about the same number in the flock.

I have kept a record of spring and fall migration of birds for several years and never before have I seen the Evening Grosbeaks, nor did I expect to see them in this locality.—
ADA LILLY, *Durand, Ills.*

A Coöperative Chickadee Nest

In the winter of 1918, a Downy Woodpecker started to drill a hole in a post in our back yard. It was just started when he left. In the spring, I noticed a pair of Chickadees pecking at the same hole. They worked for days but made little progress. Finally my mother suggested that I try to help them. I took a chisel and hammer and chipped away the hard central part of the post. Around this the wood was soft and crumbly. My work had made the opening rather large. I was afraid the English Sparrows would take possession so I took a square of heavy dark paper, cut a small hole in it and tacked it over the hole in the post. I watched from the window. The Chickadees tried but could not get in, so I enlarged the hole. They immediately entered and commenced their excavating again. They raised a brood of eight, and this summer they raised a brood of the same number. We feed the birds every winter but it seemed an even greater privilege to help them make their nest.—
F. BOYLES, *Kent, Ohio.*

A Prank of the Downy

Of all the birds that visit my feeding-station, I believe the Downy Woodpecker is one of the most interesting. He seems to be one of the first to become acquainted and when once acquainted does not forget you from season to season.

I was very much amused at one of his pranks, in fact, so much so, that I wish others to share it with me. One day as I was sitting at my window sewing the 'little man' came and gently tapped on the pane as much as to say, "There is no food on my shelf." As I was busy I did not heed his tapping and he soon disappeared. Later I thought I heard someone gently tapping at the door and arose to admit them. When I reached the door I saw my visitor, the Downy, flying away, leaving for his card a tiny hole pecked in the door. I now thought that he had been faithful enough to be rewarded with a hearty meal, so I proceeded to place food on the shelf and saw to it that he never begged so hard again.—JOSEPHINE HART WOOLSTON, *Canandaigua, N. Y.*

A Snow-Bath

In BIRD-LORE for May-June, 1921, page 125, the writer states, in reference to the snow-bath that the Downy Woodpecker and Shorelark are the only birds that participate in that kind of bath.

I saw two Juncos last winter on a branch of a Tulip tree, taking what I considered a snow-bath, after a rather severe snow-storm, in which the snow remained on the trees several hours after it ceased falling. They flipped the snow all over themselves for some time. I would like to know if this is an unusual case.—(Miss) I. M. NORTON, *Washington, D. C.*

A Trip to Gull Island

A short time ago two friends and myself decided to take a trip to Gull Island. We had heard of a bird island, somewhere near Detroit, but for a long time none of our informants knew just where this bird island was. The Government map showed no such island and the Government officials seemed to know of none. But we were undaunted and after repeated investigations we learned that Gull Island was simply a popular name for a low-lying island of sand about thirty miles from Detroit at the upper end of Lake St. Clair, an island about a half mile long and perhaps 100 yards wide, its longer axis

parallel to the Government canal at that point. Gull Island, or Sand Island, or Jefferson Butler Island, after a former president of the Audubon Society of Michigan, is now a state bird preserve located in one of the most favorable places possible. However, it is not a Gull Island but a Tern Island, for the Common Terns have taken possession and reign in peace. Here, in the midst of the Great Lake region, a region of lakes and shallows and marshes, conditions have been most favorable for aquatic birds. Although this island lies in the line of summer travel, it receives very few visits, I believe, because there is little to attract anyone save a nature-lover.

We chose June for our trip because at that time the birds would be nesting, and we wished to take photographs under as favorable conditions as possible. We left Detroit on the 'Tashmoo' at 9 o'clock, and after a delightful trip up the Detroit River and across Lake St. Clair, we disembarked at Star Island. Here we persuaded a loiterer with a launch to take us down to our island, a mile below, with the stipulation that he was to return for us at 5 P. M., in ample time for the afternoon boat. After an uneventful trip past summer cottages and hotels, we came in sight of our goal. In order to land it was necessary to remove shoes and stockings and wade, as we could not get near the island.

With us, of course, we carried our impedimenta: lunch, cameras, opera-glasses, bird-books, etc. The island is at no point more than eight feet above the river or lake, and is covered by a sparse vegetation of which a few low willows were the only tree-like forms. As we proceeded along the central axis of the island the Terns became more and more excited and vociferous, an indication that the nests were becoming more and more numerous. Indeed, the nests were on all sides now and it was only by using great caution that we avoided crushing the eggs and nests. However, we were very careful and enjoyed our new experience whether the birds did or not. How the birds flew at us, but always lacked the courage to touch us! Nevertheless we involuntarily ducked our heads. Undoubtedly, each bird took a turn at us as we

threatened each nest and all worked together, with a stupendous scream of anger and fear. We wished for a movie camera in order to show others what we saw.

Some of the nests were fully formed, in the grass; others near the grass were more rudimentary; others displayed very little grassy material; while still other eggs were absolutely nestless save for a depression in the sand.

They were frequently as close as three feet apart and held one, two or three eggs, light green or olive-brown, heavily blotched with blackish spots. There seemed to be every possible variety of coloring and blotching. We visited every part of the island and found nests nearly everywhere, although the majority of them were grouped in or near the center of the island on the higher ground. I should estimate the number of nests at 1,500.

Egg-shells were common enough, and two or three dead birds were seen, but we saw only two young birds. This was due to the fact that it was rather early in the season and also to the fact that the young are able to hide or run to water soon after hatching. The two young ones were beautiful, downy brown chicks, looking exactly like bantam chicks with webbed feet, showing no resemblance to the Tern that was to be.

We found at the lower end of the island about 200 Herring Gulls, either sterile or sick, as this Gull does not ordinarily remain in this vicinity in the summer time. Permanent residents, aside from the Terns, seemed to be very scarce, due no doubt to the activity and noise of the Terns. Song Sparrows, Sandpipers and Red-winged Blackbirds were seen. A nest of the latter testified to their residence.

It was a day of intense interest to us as amateurs. Perhaps it would have been to those of larger knowledge. At 5 P. M. our boatman came for us and we soon caught the 'Tashmoo' back to Detroit.—G. E. VAN LOON, *Highland Park, Mich.*

A Night Flight in Iowa

The May-June issue of BIRD-LORE, which just arrived yesterday, contained a letter

from Ames, Iowa, by Mrs. F. L. Battell which related an account of a flight of birds the night of February 26, 1922, and this aroused my curiosity enough so that I referred to my field-notes for that date and I copy from them the following: "Temperature 30° to 40°. Weather cloudy. Very light snow this evening. Between 9 and 10 P.M. I listened to many bird-notes, evidently by birds in migration but could not distinguish what they were. All were alike. Some fog this evening and weather barely freezing." This no doubt was the same flight of birds that was observed by Mrs. Battell, as it was at exactly the same hour.

Ames is nearly thirty miles directly east of Ogden. Could it be possible that the flock of birds was thirty miles wide traveling northward? In addition to the above notes, I recall very distinctly this particular evening, as my wife and I had been spending Sunday evening with a friend, and when we were returning home I heard them very plainly, and when we arrived home I remained out-of-doors for at least fifteen minutes standing out in the fog and mist trying to make out some of the calls but was unable to do so. There seemed to be hundreds of them. It would be interesting to hear from other Iowa observers about this flight. What can you make out of it?—W. M. ROSEN, *Ogden, Iowa.*

A Window Exhibit

The window of a book-seller's shop, in Englewood, N. J., displayed during late November and early December, 1921, a bird tableau of unique quality.

One-half of the large space was strewn with autumn leaves, from which arose belated goldenrod stalks (in pots). A stalwart tree-trunk towered at one side. Bittersweet vines clambered over a cottage window at the back of the 'scene,' and under the window glowed a brilliant sumach bush.

For what actors was this stage set?

A Nuthatch clung to the wires of a suet-holder attached to the tree; a Blue-Jay lorded it over a drinking-dish among the autumn leaves; beneath the cosy cottage window, Juncos and Chickadees were pecking seeds from a feeding-shelf; and a Downy

Woodpecker enjoyed his luncheon at an open cafeteria counter a little distance apart.

The seeking mind, aroused by this novel presentment, turned to the other half of the window to receive the explanation very obviously offered there. Three large Audubon charts showed the birds whose company we may attract and retain throughout the bleakest winter, if the enticements set forth in the scenic part of the window are persistently employed. Samples of different

other food devices were shown at a popular field club of Englewood, together with a corn stalk shelter erected on the club grounds.

All this was done by the Protection Committee of the Englewood Bird Club and the results should recommend their plan to other bird associations. A significant factor in the success of the exhibit was the timing of a lecture by Prof. Arthur Allen of Cornell University on "Bird Protection and Winter Feeding" so that it occurred during the



WINDOW EXHIBIT OF THE ENGLEWOOD BIRD CLUB

sorts of bird-foods, with, presumably, their calories, proteids, carbo-hydrates, and vitamins, were displayed with a printed list of menu prices, and places where the supplies might be obtained. The most popular books on birds were there, and for sale within the store. There resulted, also, a lively sale of feeding-trays and shelters; suet-holders and bird calendars; and a neighboring seed store had a run on its stock to the amount of a hundred pounds.

At this same time a feeding-table and

fortnight of the illustrative window, to which the cards inviting to the lecture called attention.—SARAH J. DAY, *Englewood, N. J.*

Birds of an Acre

Our yard and flower-garden cover just an acre of land. There are several large trees, including linden, maple, larch, and Norway spruce. The flower-garden, largely shrub-filled, is surrounded on two sides with old apple trees, and the walk is bordered with

large old pear trees. During the ten years that I have studied birds, from 1911 to 1921, I have seen 101 species of birds, either on the acre or flying over it, and have known twenty species to nest on it. The following is a list of them:

Common Tern (overhead), Herring Gull (overhead), Canada Goose (overhead), Black-crowned Night Heron (overhead), Woodcock, Bob-White, Mourning Dove, Sharp-shinned Hawk, Cooper's Hawk, Osprey (overhead), Screech Owl (nested), Yellow-billed Cuckoo, Black-billed Cuckoo, Belted Kingfisher (overhead), Hairy Woodpecker, Downy Woodpecker, Yellow-bellied Sapsucker, Flicker (nested), Whip-poor-will, Nighthawk, Chimney Swift, Ruby-throated Hummingbird (nested), Kingbird (nested), Crested Flycatcher (nested), Phoebe, Wood Pewee, Least Flycatcher, Blue Jay, Crow, Starling (nested), Cowbird, Red-winged Blackbird, Meadowlark, Orchard Oriole (nested), Baltimore Oriole (nested), Rusty Blackbird, Purple Grackle (nested), Purple Finch, White-winged (?) Crossbill (bird flew, recognized by note), Goldfinch, Pine Finch, English Sparrow (nested), Vesper Sparrow, White-crowned Sparrow, White-throated Sparrow, Tree Sparrow, Chipping Sparrow (nested), Junco, Song Sparrow (nested), Swamp Sparrow, Fox Sparrow, Towhee, Rose-breasted Grosbeak, Scarlet Tanager, Barn Swallow, Tree Swallow (overhead), Cedar Waxwing (nested), Migrant Shrike, Red-eyed Vireo (nested), Warbling Vireo, Blue-headed Vireo, White-eyed Vireo, Black-and-White Warbler, Blue-winged Warbler, Nashville Warbler, Tennessee Warbler, Parula Warbler, Cape May Warbler, Yellow Warbler (nested), Black-throated Blue Warbler, Myrtle Warbler, Magnolia Warbler, Chestnut-sided Warbler, Bay-breasted Warbler, Blackburnian Warbler, Blackpoll Warbler, Black-throated Green Warbler, Palm Warbler, Yellow Palm Warbler, Prairie Warbler, Ovenbird, Northern Water-thrush, Maryland Yellowthroat, Wilson's Warbler, Canadian Warbler, Redstart, C a t b i r d (nested), Brown Thrasher (nested), House Wren (nested—only known nesting record in township), Winter Wren, Brown Creeper, White-breasted Nuthatch, Red-breasted Nut-

hatch, Black-capped Chickadee, Golden-crowned Kinglet, Ruby-crowned Kinglet, Wilson's Thrush, Olive-backed Thrush, Hermit Thrush, Robin (nested), Bluebird (nested).

The following birds have taken food provided for them at our back door or on window-sill and arbor.

Downy Woodpecker, Starling, English Sparrow, White-throated Sparrow, Tree Sparrow, Chipping Sparrow, Junco, Song Sparrow, Catbird, White-breasted Nuthatch, Chickadee.—MABEL R. WIGGINS, *East Marion, L. I., N. Y.*

The Birds of an Elm

Twenty-five feet from our south windows there grows an elm which is rather large and tall. So many birds come to our trees, and particularly to this elm, that in June, 1920, I decided to make a list of all the birds I should see in the tree in a year, beginning June 5, just after the spring migration. On our lawn are two other elms and two maples, but more birds seem to come to the south elm than to the other trees, and I hoped to list fifty kinds within the year.

Our home is on the edge of a small village which is noted for its large numbers of trees. A very small stream, which is often dry in the summer, runs through the village. Very likely the trees and the stream are in a large measure responsible for the fact that many birds may be seen here. We have quite a good many resident, summer, and migratory birds, and a few that come from the North to spend the winter here.

Beginning June 5, I saw the following named birds in the elm in June: Red-headed Woodpecker, Yellow-billed Cuckoo, Robin, English Sparrow, House Wren, Kingbird, Bluebird, Bronzed Grackle, Goldfinch, Orchard Oriole, Warbling Vireo, Mourning Dove, Brown Thrasher, and Chipping Sparrow. This makes fourteen on my list for the first month.

The Dove nested in the tree, that year, and I saw a Warbling Vireo feeding her young on a limb of the tree, but did not find her nest. Robins nest in the tree every year.

In July my list showed only four addi-

tions, the Flicker, Bewick's Wren, Blue Jay, and Carolina Chickadee.

August added only three to the list: Downy Woodpecker, Catbird and Hummingbird.

September brought eleven new birds to the list, nearly all of them being migrants: Red-eyed Vireo, Red-winged Blackbird, Philadelphia Vireo, Black and White Warbler, Chestnut-sided Warbler, Black-billed Cuckoo, Pine Warbler, Black-throated Green Warbler, Screech Owl, Ruby-crowned Kinglet, and Tennessee Warbler.

The Philadelphia Vireo is the only one I have ever seen. The Black-billed Cuckoo was the first one I had seen, but since then I have seen another one in the same tree.

In October, thirteen were added to the list: Yellow-bellied Sapsucker, Blue-headed Vireo, Brown Creeper, Nashville Warbler, Hermit Thrush, White-throated Sparrow, Cowbird, Blackpoll Warbler, Orange-crowned Warbler, Bay-breasted Warbler, Myrtle Warbler, Cardinal and Phoebe.

The Cardinal is very common here, and almost every year one nests in our doorway.

Only three new birds were seen in the elm in November: a Junco, a Hairy Woodpecker, and a Song Sparrow. Thus, at the end of six months my list numbered forty-eight.

In December, the only new bird I saw in the tree was a Tree Sparrow. They come here for the winter in quite large numbers.

No new visitors to the Elm were noted until April, when a Meadowlark came to the tree. They are very abundant in the spring and summer, and some stay here all winter. We often hear their song in the winter.

May brought nine birds to be listed, nearly all being migrants, as follows: Palm Warbler, Yellow Warbler, Baltimore Oriole, Gray-cheeked Thrush, Magnolia Warbler, Least Flycatcher, Redstart, Canada Warbler, and Wilson's Warbler.

Early in June the list was completed by adding the Crested Flycatcher, which totaled just sixty seen in the elm for the year.

This list shows that birds are much more abundant about our homes than is generally believed, and that we have opportunity to

learn much about them without going out of our own dooryards.

In the last two years with the aid of my good six-power glass, I have listed 118 birds within the limits of our village corporation.—MARY S. ANDREWS, *Farina, Ills.*

Goshawk Nesting in Massachusetts

I am glad to announce the breeding of the Goshawk in Massachusetts, a consummation devoutly wished, for, lo, these many years, by Bay State ornithologists. The Goshawk nested last spring in Petersham, in Worcester County, in the central part of the state. The two downy young in the nest, which was in a large white pine, were taken May 22, 1922, by Mr. J. Nelson Spaeth of the Harvard Forest School, assisted by two of the students of the school. One of the young died after a while, but the other bird lived to become practically full-grown and to assume the complete juvenal plumage. I saw this young Goshawk, July 1 to 4, in good health and spirits apparently, during a short sojourn at the Harvard Forest School where I enjoyed the delightful courtesy of Prof. R. T. Fisher, director of the Harvard Forest in Petersham, and of his assistant, Mr. J. Nelson Spaeth. To these gentlemen I am indebted for the foregoing facts. A little later the young Goshawk died and the carcass was forwarded by Professor Fisher to State Ornithologist Forbush at the State House, and made into a skin.

The breeding of the Goshawk in Massachusetts has long been anticipated, particularly since an immature bird of the species was reported August 15, 1900, in the Hoosac range, in Berkshire County, by that keen observer, Mr. Gerald Thayer (*Auk*, Vol. XIX, 1902, p. 296.) In addition, individuals of the species have been reported in the past on other occasions in summer in Massachusetts.

While this is the first record *with date* of the nesting of the Goshawk in Massachusetts, it is antedated by a hitherto unpublished record of a nesting a dozen or more years ago in Townsend in Middlesex County, where in a small local collection a mounted adult female Goshawk and two badly blown eggs

taken from her nest in Townsend were seen by Mr. M. Abbott Frazar, the well-known taxidermist of Boston. Mr. Frazar, to whom I am indebted for this record, tells me that he sent one of these eggs by mail to Mr. William Brewster, but that it was broken in

transit. Mr. Brewster kept the fragments of the egg but never published the record. Mr. Frazar cannot now recall the date of the taking of the eggs of the Townsend bird.—J. A. FARLEY, *Boston, Mass.*

THE SEASON

Edited by J. T. NICHOLS

XXXIII. June 15 to August 15, 1922

BOSTON REGION.—The passing summer has been cool in the main, and the precipitation has been far above normal, the rain falling in almost daily deluging showers. The plentiful supply of water has caused a luxuriance of vegetation; the lawns and trees are beautifully green and the roadsides are banked with rank growth, many species of plants (e.g. wild lettuce, *L. spicata*) having attained phenomenal height. The excess of rain was unfavorable to many birds; nestlings in exposed nests were either drowned by the rain or killed by violent hail-storms; adults, also, of certain species suffered, the Chimney Swift, for example, because their feeding habits render them especially liable to starvation during prolonged stormy weather on account of the beating down from the air of all their insect food. Other birds of similar but clearly not identical feeding habits were not noticeably affected, e.g., Barn Swallows and Kingbirds are at the present time even more numerous than usual.

Nesting activities appeared to be completed early this year, hastened, perhaps, by the mortality of well-grown nestlings of single-brooded birds. The notes of nocturnal migrants were heard soon after the middle of July, very early for this region, and some species of migrating shore-birds arrived in numbers at dates not long after the earliest records of their appearance here. Lawrence B. Fletcher furnishes an interesting list of birds seen on or near the seacoast at Ipswich, Mass., on July 29, including Common Tern, Dowitcher, both species of Yellowlegs, Spotted, Least, Semipalmated and Pectoral Sandpipers, Semipalmated Plover, Marsh Hawk, and Long-eared Owl.

The most prominent departure from normal in the distribution of local breeding birds is the marked increase in the number of Hermit Thrushes in the country to the westward of Boston. Three years ago the increase was noticeable and was reported in these pages, but since then this Thrush has continued to increase, till now it is a regular and not uncommon summer resident here. Arthur J. Parker reports the bird as 'numerous' in Lincoln, Mass.

E. W. Forbush, in his 'Items of Interest,' XVII, August 16, mentions both species of Crossbills in northern Maine and New Hampshire and gives the advice, "Look out for Crossbills; especially where spruces grow."

The New England Bird-Banding Association, formed last winter, with headquarters in Boston, has made rapid advance in growth and has accomplished definite results in trapping, banding, and re-trapping birds. Many problems can be solved by this fascinating method of bird-study only after long and patient experimentation, but certain facts have already been proved since the recent discovery by S. Prentiss Baldwin of the value of the trap in banding birds. Lawrence B. Fletcher, treasurer of the Association, reports the record of a Chipping Sparrow who entered his trap nine times in ten days, three times on the same day, a record which illustrated that trapping is a method of *taming birds*. Similarly, a male Red-winged Blackbird, trapped and banded on August 5, returned the following day accompanied by an adult female and four young, all of which entered the trap and were banded. I am indebted also to Mr. Fletcher for the history of an immature Black-crowned

Night Heron, one of 102 Herons banded by him and Messrs. Floyd and MacKaye on June 17, at West Barnstable, Mass. The bird was found dead on August 7, lying under electric wires at Kennebunkport, Maine. The young bird had moved northward in midsummer over 100 miles.—WINSOR M. TYLER, *Lexington, Mass.*

NEW YORK REGION.—At Mastic, L. I., on June 24, two Yellowlegs were observed flying together. One, from its notes, was definitely a Lesser Yellowlegs; the identity of the other was uncertain. On June 25, a Greater Yellowlegs was sighted on the same bit of marsh, and, although flushed several times, did not leave. In notes and actions it seemed like a late spring bird which had been living there. On July 1, there was a Lesser Yellowlegs (and there were also about ten south-bound Least Sandpipers) on this marsh, and on July 2, a Greater Yellowlegs flying over it.

The Lesser Yellowlegs on June 24 may be considered an early south-bound bird, June 27 being the previous earliest south-bound date for Long Island; June 1, the latest north-bound. The Greater Yellowlegs on June 25, however, was probably north-bound. Had there been a Greater Yellowlegs established here July 1, the presumption would be that it was the same bird, which had summered over the critical few days between the known north-bound and south-bound migration periods of the species. None was found, and the bird of July 2 may as well have been or have not been the individual of June 25. In this connection, see observations on the Greater Yellowlegs in 1921, reported by Charles A. Urner in the July (1922) *Auk* (p. 413). Stray individuals of the species occur rather frequently on Long Island with the south-bound wave of shore-birds the first week in July. One seen by E. P. Bicknell at Long Beach, June 28, 1917, seems referable to either migration with equal appropriateness.

As regards south-bound movement of land-birds, Tree Swallows began to increase early in July and are now to be found in goodly numbers along the shore and marshes. The presence of the Yellow Warbler on July 29, in scant bushes bordering a coastwise bay

separated by a stretch of marsh from any considerable cover, is taken as evidence that the species was moving. August 6, E. P. Bicknell noticed several species of transient Warblers at Hewlett, L. I., and L. Griscom also detected such migrants in Central Park at about the same date. Two instances have been personally observed of Oven-birds striking against the screens or windows of a house. One, which had probably met its end in that manner, was picked up dead, and one seen to fly against a piazza screen and drop panting to the ground beneath, flew off in the opposite direction when approached.

Reports of southern Herons which have come in so far (August 15) are confined to a juvenal Little Blue Heron at Greenwood Lake, July 27 to 31 (R. F. Haulenbeek), and several of the same species as well as American Egrets on the Newark Marshes (Miller and Urner).

At Demarest, N. J., B. S. Bowdish secured two Song Sparrow 'returns' of interest in connection with the study of that bird's movements by means of banding. One of these individuals (No. 50024) which had been banded April 26, 1921, was retaken July 9, 1922, and another (No. 50045), banded July 13, 1921, retaken July 16, 1922, significantly close to the date of its original capture.—J. T. NICHOLS, *New York, N. Y.*

PHILADELPHIA REGION.—With the idea of looking into the present status of some of the Tern and Black Skimmer colonies of the New Jersey coast, investigations were carried on during the 'Season' just past on a number of the more thinly populated beaches.

Four colonies of Common Terns, containing perhaps 75, 100, 50, and 100 birds; three colonies of Skimmers of approximately 14, 20, and 60 birds; one colony of Least Terns of 30 birds were looked into; also, probably some 20 pairs of Piping Plover were found. One downy young of the last species was discovered on Seven-Mile Beach July 30.

One of the smaller Skimmer colonies was deserted by the birds before any young were hatched, probably because of frequent visits by summer cottagers, although a colony of Common Terns nesting in the same locality stayed and succeeded in raising a few young.

Three trips were taken to the island on which the Least Terns, one colony of Common Terns, and the colony of 20 Skimmers were nesting, and while the following brief account may by no means be accurate, it will give some idea of the vicissitudes, dangers, and misfortunes of these colonial birds.

June 25. Common Terns, about 100; about 30 nests with eggs; about 10 downy young; a number of eggs laying around in the sand as if washed out of the nests by high tides. Black Skimmers, 14; 2 nests, one with 5 eggs. A pile of some 30 eggs (mostly Skimmers') laying on the sand as if gathered by someone who wished to see how many could be found. Least Terns, 30; 9 nests with 2 eggs each; 3 downy young, one with pin-feathers starting on wings.

July 16 (second trip). Common Terns, 75; 2 nests with eggs; a number of downy and some well-feathered young found stretched prone on the sand and hiding in the sparse grass, also a few young birds on the wing, the young birds being distinguished from the parents by their quicker wing-beats and labored flight; numbers of eggs scattered about. Black Skimmers, 14; 3 nests, one with 3 young just hatched. Tracks of a horse, dog, and man in the sand. It looks as if these birds were persistently robbed. Least Terns, 30; no nests with eggs found, 1 downy young, probably there are more as these little fellows are just the color of dry sand and hard to see; the parent birds all flying about very anxious.

August 18 (third trip). Common Terns 40; no nests with eggs; 2 young with pin-feathers starting; most of the birds appear to have finished breeding and have scattered. Black Skimmers, 20; 6 of these birds are young, in gray plumage, 5 are flying about, the other one was found by Jack Crosby, lying prone on the sand. The bird is well feathered but unable to fly; if put on the sand he immediately squats; finally he is induced to move off, which he does rather hurriedly. The lower mandible of this bird protrudes about an eighth of an inch beyond the upper. Adult Skimmer found dead, floating on surface of Inlet, apparently shot. Least Terns, 10; no young are found, though old birds are seen flying about with food in their bills,

also show considerable alarm; most of the birds have apparently left.

While all the colonies suffer more or less from eggers, floods, etc., there seems to be no immediate danger of their being exterminated though one cannot predict with any degree of accuracy in view of the rapid growth of the resorts on the New Jersey coast. A sanctuary which would include a strip of beach, it would seem, would be the proper thing.

Sanderling, 2 Knots, and a Semipalmated Plover were still present on Seven-Mile Beach, N. J., June 18. At this time, also, an Oyster-catcher was observed. This bird was probably a straggler and not nesting, as he manifested no apprehension such as nesting Oyster-catchers at Cobbs Island, Va., had been observed to do when breeding. A very good view of the bird was obtained, but, true to his wild nature, he did not permit of very close approach. As he took wing, the striking wing pattern was plainly seen. C. K. Roland was present and also observed the bird. He also is familiar with the species, having seen it on the Virginia coast islands. Three Turnstones and several Least Sandpipers were noted on the meadows near Atlantic City, N. J., June 25.

The migration of south-bound shore-birds was in full swing July 16. Dowitcher, 150 (4 flocks); Black-breasted Plover, 60 (2 flocks); Willet, 2 (Western ?); together with a fair number of the commoner species were all noted on the salt marshes near Atlantic City. Here also Black Terns (7 adults) were observed June 25 and July 16. A large flight of Least Sandpipers, perhaps a thousand birds, and a few Pectoral Sandpipers are at present writing (August 14) frequenting a filled-in, muddy meadow near the outskirts of Camden.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—Ornithological conditions in the vicinity of Washington, D. C., were about normal during the months of June and July, 1922. The weather was for the most part moderate and thus favored the usual avian activities. In general, birds were rather numerous, possibly more abundant than usual at this time of the year

Some species, like the smaller Flycatchers, were, however, less frequently seen than in recent years; others, like the Whip-poor-will, appeared to be more common.

In view of the fact that all the transient visitors and all winter residents had passed northward by June 1 of this year, there is little of interest concerning such movements to chronicle in the present report.

The Pied-billed Grebe, which is common in fall, sometimes also in spring, but which, so far as we know, has not previously, except once (June 10, 1919), remained later than the middle of May, continued here this year until June 21. A flock of eight was observed by F. P. Callaghan along the Potomac River, near Washington, regularly from early June to the above date. From this we may indulge the hope that the species may at some future time breed in the Washington region.

Two individuals of the Double-crested Cormorant, which is a rare straggler in the vicinity of Washington, were seen by Miss M. J. Pellow along the Potomac River, near Marshall Hall, some fourteen miles below Washington, on May 31 of the present year. It is interesting to note that this Cormorant has been certainly reported from this region in only five previous years—1859, 1884, 1896, 1917, and 1921—although there-sometimes has been more than one record in a year.

The European Starling, which has been rapidly increasing in numbers since its appearance here a number of years ago, has now become a common bird in most of the region about Washington, both in winter and summer. Young birds this year have been conspicuous in many places during July.

The Nighthawk, which commonly belies its name of 'Nighthawk' by being abroad mostly in the daytime, occasionally flies also by night, but this is not so regular an occurrence that it entirely ceases to be a matter worthy of comment. During the early part of June, Nighthawks were frequently heard calling on the wing after dark in the outskirts of the northern part of Washington. On June 6 they were heard at 8.30 P.M., on June 7 at 9.40 P.M., on June 9 at 10.45 P.M., and on June 11 at 1.45 A.M. They were thus abroad at practically all hours of the night, though it will be noted that on all

these nights there was bright moonlight, as the moon was full on the 9th of the month.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

OVERLIN (OHIO) REGION.—The weather during the summer has been very different from that of the two preceding years. There have been frequent showers and wet and cool weather with but a few really hot days as compared with 1920 and 1921. However, August up to date (15th) has been dryer and warmer. The birds have been fairly numerous and seemed to have been more in prominence. The weather seemed to invigorate them to greater activity.

The Red-headed Woodpeckers have been more common than usual this summer as they likewise were last spring. Bob-whites could be heard whistling on all sides of you. They are by no means abundant, but their numbers have steadily increased the last few years. However, in winter, when they are gathered in flocks and are silent, they seem, of course, less numerous, and as one has almost to step on them to flush them, they even at times seem almost uncommon.

The Turkey Vulture is a prominent bird in this region during the summer months. At places along the Vermillion River where farmers leave their dead animals lying in the fields, they are especially numerous. In such localities at least a few birds can be seen every day, while flocks of 15 to 30 are a common sight and once in a while the flock numbers over 40. Such a gathering circling around in the air at one time certainly makes a startling scene.

The Bobolinks had all ceased singing and left the fields and meadows to gather in flocks the second week in July. The Baltimore Orioles, after a silence of about three weeks, were heard singing again the last week of the month. The song however, was unequal to their rich full melodies of May.

The nesting of all the birds, so far as known, has been satisfactory. One record especially is interesting, that of a pair of Pied-billed Grebes which was seen with a young one on June 30 in the marshes near Vermillion. They were seen a number of times later during the summer in the same

place. It is a very unusual occurrence to find them nesting in this region.

Although there has as yet been no distinct indication of any migration besides the usual flocking together, that of two Black Ducks seen on August 3 is rather suspicious. As there were no signs of their nesting, and as they were not found at any time previous during the summer months, they must have been mere wanderers from another realm, their nesting region perhaps which lies farther north. It is a month at least too early for them to be in migration.—S. CHARLES KENDEIGE, *President of Cardinal Ornithological Club, Chicago, Ills.*

MINNEAPOLIS (MINNESOTA) REGION.—The last half of June was marked by changeable weather alternating from cool, pleasant days to very hot ones, an unusual maximum of 99.1° being reached on the afternoon of the 22d.

July was reported by the local United States weather observer as "the coolest July in seven years and the driest in six years." The average temperature was 70° compared with 77.4° last year, and a normal average of 72.2°. The total precipitation was only 1.76 inches, compared with 3.16 inches last year and a general normal of 2.05 inches. The month closed with one or two very hot days—91° on the 30th. The hot spell thus begun continued with only a brief intermission (from the 4th to the 8th) until the middle of August. Midday temperatures of over 80° prevailed, reaching 92° on the 3d. Several severe electric storms, accompanied by heavy rain and hail, occurred.

There has been this year an unusually abundant crop of fruits of almost all kinds, both cultivated and wild, due perhaps to the cool weather of July. Vegetation has grown rank and tall and flowering plants have blossomed profusely.

June 15. A brood of young Tree Swallows just leaving the nest.

June 16. While watching a Song Sparrow's nest in which one of the two eggs that it contained was just hatching, a common garter snake, 30 inches long, suddenly appeared, seized and made off with the young bird in spite of a vigorous attack by one of the

parents. When pursued the snake quickly swallowed the tiny nestling. On being killed and dissected a second young Song Sparrow was found in the stomach, presumably another of the same family which accounted for the smallness of the brood. The snake had a hole under a large stump close by, toward which it was retreating when overtaken and killed. The nest with the remaining egg was deserted. Another large snake of the same species killed close by contained the feet and wing feathers of what was apparently a well-grown nestling Blackbird, the rest of the bird having been fully digested. Both of these snakes were females and contained from twenty-six to twenty-eight small young inclosed in the egg-sacs. The garter snake is very abundant hereabouts and it seems probable that it takes during the nesting season a heavy toll from ground and low-nesting birds.

July 1. White Water-lilies coming into bloom.

July 11. Many young Clay-colored and Field Sparrows of first brood are on the wing. The Field Sparrow has always been uncommon or entirely absent in the immediate vicinity of Minneapolis but only 15 miles northeast in a sandy, oak-open country in Ramsey County it occurs regularly in considerable numbers. It is an abundant bird in southeastern Minnesota as far north as Lake City. North of this it is unevenly distributed as far as Isanti and Sherburne counties. Records farther north probably refer to the Clay-colored Sparrow.

Nesting Vesper Sparrows of the second brood two-thirds grown.

The sandy hillsides are thickly covered with dense masses of the Jersey tea, the fluffy white carpet variegated with innumerable golden blossoms of the coreopsis (*C. palmata*).

July 18. A Cedar Waxwing's nest with young just hatched. A Clay-colored Sparrow's nest with young one-half grown.

July 23. A family of Crested Flycatchers flying about among the trees, the young being fed by the parents. The first Black Tern showing traces of molt about the head.

July 25. A brood of nestling Kingbirds about one-half grown. The Cedar Waxwings

mentioned above were feeding their young white berries—the only *white* berries to be had at present are those of the poison ivy.

Culver's root, bergamot and early sunflowers in full bloom. Goldenrod and blazing star just coming into bloom.

July 27. A Field Sparrow's nest with young about three-fourths grown. A Clay-colored Sparrow's nest with two fresh eggs.

July 29. First young Black Terns on the wing (Kilgore).

July 31. Young Cedar Waxwings left nest today. It is curious to see the young of this bird, almost as soon as they are able to stand, strike the prolonged 'freezing' attitude of the adults.

August 4. A Song Sparrow's nest containing four fresh eggs. Of all the Song Sparrows' nests seen this year none has been on the ground. All have been from 6 to 18 inches up in small bushes or shrubs.

An old Loon and her two young, almost full grown, seen together in a small lake where they have been since spring. Many young Black Terns now a-wing.

While watching the nest of a Goldfinch at close range from a photographing tent the following notes were made:

The five young birds were about three-fourths grown.

Both male and female fed the young at intervals of about half an hour.

The young were fed a white sticky paste or 'pap' which was regurgitated from the gullet in small amounts and given to all the nestlings in rotation several times around at each visit. There was no sign of food in the bill of the parent when it came to the nest. It seemed probable that this 'pap' consisted of the white meat of seeds mashed up after the removal of the hulls. No other food was brought during the several hours that the nest was watched.

On at least one occasion the female was seen to take the excrement from all the five nestlings and swallow it beside cleaning up the inside of the nest in the same way.

The young birds at this age ejected excrement to some extent over the rim of the nest where it was apt to lodge and render the outside of the nest soiled and untidy.

Once the male bird alighted on top of the

tent and spent some time peeping curiously down through the ventilating aperture as though bent on finding out what was going on inside. It seemed to us as though he was after this much more wary about approaching the nest, which was something less than 3 feet from the movie camera. He had apparently seen too much.

August 8. A Barn Swallow's nest containing four eggs. A Maryland Yellowthroat still singing its '*wilchite*' song. Blue-winged Teal Ducks in flocks of twenty or more at the Long Meadow sloughs.

Ironweed and golden aster in full bloom.

August 14. The eggs in the Song Sparrow's nest mentioned on the 4th beginning to hatch today. A Mourning Dove's nest containing two eggs (Huff).—THOS. S. ROBERTS, M. D., Zoölogical Museum, University of Minnesota, Minneapolis, Minn.

CHICAGO REGION.—The weather has been fair and warm during the past two months, the temperature ranging between 65° and 80°, with very little rain. The rainfall during June was the lowest for fifty-two years, only .14 of an inch being registered, and the rain of July 11 ended a forty-three day drought.

The presence and early appearance of numbers of shore-birds is the notable feature of the recent period. On June 17 and 18 the writer found a Black-bellied Plover and two Red-backed Sandpipers at Beach, Ill. Three Turnstones and a Long-billed Curlew flew by and lit a short ways up the beach where they were watched for a short time at close range. The Curlew was very wary, soon flying north, and on following four miles up the beach it could not be found, although the Turnstones were seen twice. It is probable that all these were non-breeding birds spending the summer here. Five pairs of Piping Plover were seen along as many miles of lake shore and were, without doubt, nesting there. Spotted Sandpipers were plentiful and a nest with four eggs was found.

Hyde Lake, near south Chicago, has been the locality where the waders have been the most abundant. Wilson's Snipe, Dowitcher, Pectoral, Least, Semipalmated and Solitary Sandpipers, Yellowlegs, and Semipalmated

Plover were found there on the following dates; July 2 (B. T. Gault and C. J. Hunt), July 22 (G. P. Lewis), July 23 (B. T. Gault and C. J. Hunt), July 28 (Lewis, Sanborn and Conover), and August 6 (Sanborn and Conover). The Dowitcher and Semipalmated Plover were first seen July 22. Least and Semipalmated Sandpipers and Plovers were in the greatest numbers, with Yellowlegs and Pectorals next and a few Dowitchers and Jack Snipes, the latter birds probably young raised near there.

With the exception of the Dowitcher and Snipe, all these birds have also been reported from the Lincoln Park beach on July 18 and 22 by G. P. Lewis and July 22 and August 8, by B. T. Gault. Mr. Lewis added Upland Plover to the list on the 22d and Mr. Gault added Red-backed Sandpiper the 22d and Sanderling August 8. On the 22d Mr. Gault had a very close view of two Marbled Godwits, a rare record from this region. Bonaparte's Gulls and Common Terns were also there August 8.

Messrs. Gault and Hunt found a few Yellow-headed Blackbirds at Hyde Lake, July 2, and a King Rail's nest with nine eggs. The writer found the Blue-gray Gnatcatchers at Beach again this year on June 18 and July 16, but had no time to look for the nest. E. J. Scupham saw a Turkey Buzzard, August 6, on the Kankakee River. It was after a heavy rain and the bird was perched on the top of a dead stub drying its wings and plumage. The small flock of Scaup stayed in the harbor off Chicago until July 30, when the hydroplanes, motorboats, yachts, and dredges evidently became too much for them. No Warblers have been reported as yet.—COLIN CAMPBELL SANBORN, *Chairman Report Committee, Chicago Ornithological Society, Chicago, Ills.*

KANSAS CITY REGION.—A numerous colony of Traill's Flycatchers nested again this year in the extensive willow thickets in the Missouri River bottoms near the mouth of Big Blue. Scores of nests were watched during the last two weeks of June and the early days of July. The full complement of eggs in the nests of this colony varies about equally between three and four, only a single

set of five being seen. It was found that this species does not lay an egg every day, but that several days usually elapse between the laying of successive eggs. Yellow Warblers were also numerous in the willows, and those individuals of the two species that chose their nesting-sites deep within the thickets were not imposed on by Cowbirds, while nests located in more open situations usually contained eggs of the parasite. In the older parts of this region, where there are large areas of broken and dead willow stubs of from three to six inches in diameter, the House Wrens are particularly numerous nesting in old Downy Woodpecker holes and natural cavities. It was noticed last year for the first time, and verified this season, that every nest of the Wren in this wild region contained fragments or whole cast snake-skins. This material was worked into the lining, as the outer nest was of the usual coarse construction.

A visit was paid late in June to the Holt County, Missouri, farm of Charles E. Dankers for the purpose of examining recent acquisitions to his collection of birds and Missouri records, and to see again his large flocks of wild Geese. It was found that his Blue Geese had been breeding during the past two seasons, and the writer was presented with a fine set of these rare eggs. Mr. Dankers has established several unique bird records for western Missouri, as well as two or three for the entire state, which have been recorded elsewhere. A recent record of interest was the finding of a nest of young Marsh Hawks near his home on June 4.

A pair of Upland Plover, presumably the same that have nested for several years in the Waldo region, were present this year in the large pasture on Oak, between 71st and 75th streets. They were not found until late in June and had evidently succeeded in bringing off their young, as they were very solicitous of something in the high grass that could not be found.

Records of the Blue Grosbeak have accumulated to such an extent that it is puzzling to know whether the species has extended its range into this region lately as has been supposed, or that the bird has been

merely overlooked which is hard to believe. At all events the recorded local status of this species will need to be entirely revised.

A deluge of rain, accompanied by a gale of wind, early in July, did some damage to young birds, and a severe squall near the end of the month added something to the mortality, but in the main the season has been favorable to bird-life and there is much evidence of an enormous crop of young of all the common species. Late in July the Robin and Dove-roost in the grove of old pines on the Country Club golf-course was visited and found to be in use by even more birds than last year. The Robins especially are in greater numbers and are flying in from all points of the compass, whereas last year they were noted coming from the east or northeast. The usual large flocks of returning Grackles testify each evening to the continuance of the Rockhill roost of this troublesome species.

The writer does not remember ever having seen all kinds of wild fruit in such abundance as this year. Wild cherries are actually hanging to the ground, and dogwood trees are loaded with berries. Other berries beloved of birds, such as poison ivy, bittersweet, sumac, wild grape, together with all the ornamental shrubs and market fruits, are in the greatest profusion, and it will be interesting to note what effect, if any, this will have on migration.

Full-grown young Mockingbirds were seen on July 31. This is one of the off years for this bird, as only two pairs have been found in a territory where a dozen or more have been located in other years.

A few troops of Blue-winged Teal have lately been seen on the river near the city, and stragglers have been met with on ponds nearby, indicating that the usual few broods have been raised in the region. The pair referred to in the last letter as beginning a nest within throwing distance of a boulevard had to abandon their site to the small boy. Other possible sites are rapidly being improved and cultivated until there is little hope of ever seeing the increasing water-owl stop here to nest. It is different, however, with the Bob-white. This bird has found conditions so favorable within the

southern boundaries of the city and adjacent territory that it has about reached the limit of its abundance. It has become so tame in certain localities as to stalk about in full view of passing traffic and to perch about on fences and street signs. The past several seasons have been favorable to its rapid increase, and what with being entirely let alone except by its natural enemies it has increased by leaps and bounds.

Thomas Hayes Whitney writes of the singing of the Veery at Atlantic, Iowa, during the spring migration. Mr. Whitney has a summer home in the north woods and knows the bird well. It is rare indeed that this bird is heard in song while in transit through this region.

A. Sidney Hyde had unusual good fortune with migrating Warblers in the Topeka region, and reported such local rarities as the Bay-breasted and Canada Warblers and the Woodcock.

Ralph J. Donahue reports seeing an Egret at close range on a lake in the vicinity of his home at Bonner Springs, Kans., on July 30.—HARRY HARRIS, *Kansas City, Mo.*

DENVER REGION.—Many readers of BIRD-LORE are familiar with the belief held by ornithologists that some western birds raise the first brood in the spring on the plains, and the second or later broods higher up in the adjacent mountains. I believe that this is correct with at least two or three species common about Denver. This belief, however, has not been susceptible of proof up to date, but that it will be settled after a while cannot be doubted, for the establishment in the near future of banding stations on the plains and in the mountains will furnish positive data for or against the hypothesis. A recent motor trip across the Continental Divide focused anew my attention on this question. When leaving Denver early one morning, no Pine Siskins were noted in the city nor in its surrounding country, yet, immediately on getting well into the mountains (not lower than 7,000 feet) they became common and seemed to be nesting.

This motor trip exhibited in a striking and most enjoyable manner how well an auto lends itself to making a *vertical* cross-section

of the birds of a mountain region. Leaving Denver (altitude 5,200 feet) in the morning, one gradually climbs to higher and higher levels, and, without undue haste, in four hours can be at timber-line on Berthoud Pass, for example. Timber-line at Berthoud Pass is at 11,500 feet altitude. On the way up to this level one will see several species which visit Denver and the plains only in the fall, winter and early spring, such as Gambel's Sparrow, Gray-headed Junco, Long-crested Jay, Townsend's Solitaire, Audubon's Warbler, Piñon Jay, Rocky Mountain Jay, and Clark's Nutcracker, and if one is not in a hurry, many more can be seen, each at its appropriate level. When one drops onto the lower levels of the Pacific watershed, at Grand Lake, perhaps, other forms become abundant, especially the beautiful Violet-green Swallow. All of the above listed species were seen on this particular motor trip, together with others not specifically mentioned. At and above timber-line, those hardy pioneers, the Titlark and the Gray-headed Rosy Finch were seen, these two species being very noticeable on Flat Top at an altitude of 12,000 feet. It was a matter of something more than ordinary interest to watch a Marsh Hawk plying his trade at this altitude, sweeping over the rocks, and about the little lakelets on and near the Divide with as much elan as over the plains or over a New Jersey marsh.

This season has reimpressed me with the impossibility of divining the reasons why the complexion of a local bird-life should change so much from year to year.

Now that the young are able to fly, it becomes very apparent that a large number of Wood Pewees were successful in nesting this year in and about Denver. One sees an unusual number of them these days, and the second or third brood of Robins must also have been large, the residential parts of the city almost swarming with them. Yet there have been no Warbling Vireos to speak of, very few Black-headed Grosbeaks, and fewer Chipping Sparrows.

The summer so far has *seemed* warmer than ordinary because of a somewhat greater humidity, a combination which may have a relation to the scarcity of some local birds.

One can count with great trust on seeing flocks of Bronzed Grackles appearing or reappearing in Denver and its environs about the middle of August. This year the first came under my notice on August 6; on the morning of August 14, Upland Plover were heard calling as they flew over my home, and on August 6 and 7, the first Rocky Mountain Hairy Woodpeckers reappeared in the city. These two last species are very apt to be seen in or over the city any time after August 1.

Several years ago quite a few Bob-white flourished along the Platte River immediately above and below its course through Denver. They have been decidedly scarcer during the past four years. It was a welcome sound to hear again the calls of this species in the neighborhood of Loveland on August 5, and I hope that it means that the species will get a fresh start. A native species which has almost deserted Denver, the Barn Swallow, was detected nesting in a barn on the eastern edge of the city. This effort at nesting, and those of Bluebirds, and Mockingbirds, prompts one to hope that more will succeed in the future, and also makes one realize with sorrow what a great change the English Sparrow has wrought in the bird-life of this city. Even now, despite the obnoxious Sparrow, if given a bit of encouragement and help these species, and Wrens and others are occasionally successful in nesting within the city proper. For the past few days there have been no Yellow Warblers about my neighborhood. As this is being written (August 15) they are again singing freely in Cheesman Park. I believe these two facts mean that our local Yellow Warblers departed for the South about a week ago, and that those here today are migrants either from the mountains or from the North.—W. H. BERGTOLD, *Denver, Colo.*

PORTLAND (OREGON) REGION.—Nothing particularly startling was noticeable in the months of June and July in this district. The small birds have been nesting in normal numbers and at about the usual dates. Yellow Warblers seem to be even more common than usual and the Green-backed Goldfinches have been particularly noticeable.

None of the handbooks or lists record the Green-backed Goldfinch from Oregon, although, as a matter of fact, it is one of the commonest birds throughout the western part of the state. It is very abundant about Portland, and in the vicinity of my own home on the east side outnumbers the common Willow Goldfinch.

During the month of June, Stanley G. Jewett was on the Malheur Lake Reservation and reports that there is a considerable increase in numbers among the Egrets, Ibis, and Western Willets. He also reported that Ducks, particularly Cinnamon Teal and Gadwall, were present in numbers. He found that the Ravens were destroying enormous numbers of nests and eggs, which is, however, a usual thing about these big bird colonies in the desert countries. He also found the Sandhill Cranes to be less numerous than usual.

Bob-whites, which have been introduced into this country, seem to have had a good year and are more abundant than they have been at any time in the past four years. The Robin has become so numerous as to be a pest to the berry-growers of the Portland district and causes considerable loss to the earlier berries, but later, when berries become more abundant, the loss is not so noticeable.

On July 20, while on the beach of Lincoln County, a large shore-bird migration was noticed. This consisted principally of Western Sandpipers and Hudsonian Curlews. One flock of 17 Sanderlings was noted and a single Long-billed Curlew. A small flock of Dowitchers and 5 Greater Yellow-legs were seen on the mudflats at Newport. The usual sea-birds were noted along the coast, California Murres and Tufted Puffins being particularly common. At the jetty in Newport, large numbers of Cassin Auklets and Marbled Murrelets were feeding in the harbor entrance. I also noted a considerable number of White-winged and Surf Scoters and three or four American Scoters which evidently had spent the summer off this coast. One dead American Scoter was picked up on the beach and 15 to 20 California Murres with oil-soaked plumage were found dead, or dying, during the day.—IRA N. GABRIELSON (OF U. S. BIOLOGICAL SURVEY), *Portland, Ore.*

SAN FRANCISCO REGION.—The whole of the period covered has been free from hot weather and has contained very few cold, foggy days. Bird-life has seemed exceptionally abundant in the East Bay region. A half-hour walk through Strawberry Canyon on June 16 revealed the presence of many pairs of Black-headed Grosbeaks, Song Sparrows, San Francisco and California Towhees, Pileolated Warblers, Vigors Wrens, Bush-tits, Wren-tits, and Russet-backed Thrushes. There were two Tolmie Warblers singing, but no Vireos, either Hutton or Warbling. On the lower campus, Warbling Vireos were present but in reduced numbers, and Russet-backed Thrushes had not yet regained the normal population. Coast Jays, Robins, Juncos, and Pine Siskins were noticeably on the increase, but Lazuli Bunting were hard to find (Dr. Miller). One of the usual nesting areas of the Rufous-crowned Sparrow was burned over last year, with the result that none of that species has been observed since. On other bushy hill-sides they are present as in former years. The usual niches were occupied by Olive-sided Flycatchers, but few Wood Pewees were reported except from the Contra Costa side of the hills. Mr. and Mrs. Kibbe found the Bell Sparrow as formerly in its island of artemisia and fern on a south sloping hillside.

By June 18, young Quail were trailing through a Berkeley garden. House Wrens left their box on June 19, and Western Flycatchers tried their wings for the first time on June 21. A second brood were raised in the same nest and were almost ready to fly on August 5. Full-grown young Thrashers were accepting food from the parents on June 29, and young Blue Jays began to pick up food provided on July 3. Yellow Warblers were singing still on August 10, and a Robin on the topmost spray of a deodar saluted the setting sun with its usual melody on August 13.

Shore-birds are reported by Mrs. Kelly to have been very scarce during June. None were seen on June 26, but on July 7 Curlews began to come in and by August 4, 30 were counted on the mud-flats near Lincoln Park. Six Godwits and 4 Willets were also seen on July 7, but the numbers have not increased

as yet. Four Semipalmated Plover were first seen on July 8 and they have increased steadily since that date, as have also the Western and Least Sandpipers. Dowitchers are still very scarce, 1 having been seen on July 22 and 2 on July 23. Forster Terns were seen first on August 4.

A week spent in the mountains August 5-12, at an elevation of 6,000 feet, showed few signs of migration or flocking. Most species were in family groups, feeding together where food was most abundant. Robins had deserted the mountain meadows and were feeding on berries which were fast ripening on the open bushy mountain-sides. On the same slopes were Western Tanagers, Cassin Purple Finches, and Western Evening Grosbeaks, which flew back and forth from the shrubs to the bordering forest trees, while underneath the bushes Green-tailed Towhees and Fox Sparrows kept to their usual haunts. In the dense forest growth Slender-billed and Red-breasted Nuthatches, Golden-crowned Kinglets, Mountain Chickadees, and Audubon Warblers gleaned their insect food, and a White-headed Woodpecker searched every cranny of a moss-grown stump; Wood Pewees caught the low-flying insects, while the Olive-sided Flycatchers darted out from the dead tops of the highest trees. In the alders along the river bank were Calaveras and Pileolated Warblers and in the brush that grew on rocky divides were Rock Wrens and Wright Flycatchers. Higher still in the Juniper belt were Clarke Nutcrackers in family groups. Two birds ordinarily common at this altitude during the nesting season seemed to have departed: the Mountain White-crowned Sparrow and the Ruby-crowned Kinglet, and only one Nighthawk was seen. As we came down through the foothills on August 12, families of Horned Larks perched on the wire fences, and Meadowlarks and Brewer Blackbirds were seen. As we approached the upper bay large numbers of Barn Swallows and Cliff Swallows were assembled—the only flocks observed during the week.—AMELIA S. ALLEN, *Berkeley, Calif.*

LOS ANGELES REGION.—An item of interest that reached me too late for last report,

records the appearance of a small flock of Cedar Waxwings at the bird-bath of a Whittier member as late as June 4.

June 14, one to two weeks earlier than in former years, occurred our annual observation of birds, with reference to nesting in a canyon of the Sierra Madres. The day's list was made up of fourteen resident birds and twenty summer visitants. Bird-songs, nests, the gathering of nesting materials, food-carrying, all proclaimed that this favored place held its average quota of breeding birds, but in only one instance was a family of young birds found—Pileolated Warblers apparently just out of the nest. The anxious behavior of a pair of Lutescent Warblers nearby seemed to point to a possible nest in the locality. Nesting of this species in this locality is rare. Western Tanagers were numerous and in song. Black-chinned and Costa Hummingbirds were noted, and one pair of Lawrence Goldfinches was seen.

June 22. Mrs. F. T. Bicknell reports a pair of Bald Eagles nesting on a cliff at Catalina Island. The Allen Hummingbird was also seen there. On this date a small number of Western Martins appeared at Echo Park, and have frequently been seen since that time. On August 1 and 2, they fed young that were perching on the wires. August 6, there were eighteen, most of which were young. August 8 and 9, all disappeared.

July 9, Upper San Antonio Canyon. Comparison of list of this date with that of May 14, the walk being taken at the same hours and over the same course, afforded striking contrasts. Pine Siskins, Cassin Finches, and all the Warblers had disappeared. There was little song, other than that of the Black-headed Grosbeak and the Warbling Vireo. Blue-fronted Jays, Wood Pewees, Thurber's Junco, and the Western Tanager were feeding young. Violet-green Swallows, an Arkansas Kingbird, Ash-throated Flycatchers, and a Western Gnatcatcher were added to the lists. The Swallows were evidently at home in the dead spruces of a high forested slope, and came down to hawk over the chaparral of the Upper Sonoran area, where the last-named birds were also seen. A Water Ouzel passed up the stream.

July 23. Western Blue Grosbeaks were again seen in the Balboa region, two individuals being in typical plumage and one brown with only the head blue. A Virginia Rail was seen in the salt marsh. On July 26, a pair of Blue Grosbeaks was seen at Artesia, where Kingbirds were numerous, Cassin's being noted as well as many Arkansas. About one thousand Cliff Swallows were congregated near a ranch reservoir. July 29, another assemblage of Cliff Swallows was noted numbering several hundreds. On this date Barn Swallows were still feeding young at the nests under a bridge at Playa del Rey.

Mid-July had arrived before any trips to the shore were undertaken. July 16, the migration of shore-birds seemed to be well under way, Hudsonian Curlew being fairly numerous, and several small flocks of Sandpipers and Semipalmated Plover noted, as well as 4 Willets. Fifteen White-winged Scoters were on the ocean at Playa del Rey, at least 5 being males. They had very probably remained through the summer. Fifteen Least Terns and a few Snowy Plover were noted. July 23, brought a few Marbled Godwits and many more Curlews. July 26, 1 young Heerman's Gull was noted. July 29, at Playa del Rey, the writer saw 1 Long-billed Dowitcher come into the lagoon in company with 12 Curlew, apparently after a long flight. It was in summer plumage of brighter, deeper tones than those seen in the spring. Six Willets were noted. The 15 White-winged Scoters were again seen.

August 6, 2 Roadrunners were seen on the

Annandale golf-links. A repetition of the now familiar walk in the mountains yielded but meager returns, the total list comprising the Water Ouzel, Canyon Wren, 5 or 6 Quail (Mountain), 1 young Thurber's Junco, Warbling and Cassin's Vireos, the latter feeding young, Wood Pewee, and many Blue-fronted Jays.

August 6 and 7, a strange bird visited the feeding-station of our Pasadena members, the Miss Wilsons, affording opportunity for careful observation. Its markings were found to correspond to the description of the Juvenal plumage of the Desert Sparrow (*Amphispiza bilineata deserticola*). There is one record of the occurrence of this Sparrow near Pasadena.

August 10. A walk from Sunset Beach to Bolsa Chica disclosed the presence of a small colony of Least Terns with young half grown. Snowy Plover were numerous in the same locality. Willets were present all the way in extraordinary numbers. Hudsonian Curlew and Marbled Godwits were abundant, small Sandpipers much more numerous than on previous trips. In the lagoon at Bolsa Chica were five or more Black-necked Stilts, and a Kingfisher hovered above the water, harried by Barn Swallows. Two young Black Terns dropped onto a bar where Gulls and some waders were resting, rising very soon to course over the marshes in characteristic manner. Western Gulls were common.

August 10. Poor Will's heard in Griffith Park. Other earlier reports have reached us of their presence there.—FRANCES B. SCHNEIDER, *Los Angeles, Calif.*

Book News and Reviews

The Ornithological Magazines

THE *AUK*.—In Memoriam: William Palmer,' by Richmond, with photographic portrait frontispiece, opens the July number of the *Auk*. Palmer was for forty-seven years connected with the United States National Museum as field collector and taxidermist. Meanwhile he contributed largely to the art of taxidermy, gathered specimens for the Museum in different parts of the world, and gave to science the product of keen observation with clear independent deduction. To other and younger ornithologists he gave the inspiration of a boyish enthusiasm for field investigations, never lost. William Palmer's published papers are varied and scattered, and it is very nice that a list of them follows this memorial sketch.

Lincoln describes methods and traps (illustrated) for taking Ducks for banding purposes, and gives details of returns from banding 206 Ducks at a single station north of western Lake Ontario in the fall of 1920 by Mr. H. S. Osler.

These birds were mostly Mallards and Black Ducks, the majority whereof migrated down the Mississippi Valley; a smaller number crossed the Alleghanies to reach the Atlantic coast at Chesapeake Bay. Two Ring-necked Ducks, banded, seem to have followed the latter course and were killed respectively in Virginia in November and South Carolina in January. Several Blue-winged Teal were banded, but the early migration of this species seems to have carried them beyond the United States before the opening of the gunning season. One, however, was taken in the West Indies, September 24.

L. R. Talbot, operating S. P. Baldwin's trapping station at Thomasville, Ga., in the spring of 1922, met with a Brown Thrasher now at least eight years old.

In 'Bird Notes from North Greenland,' Langdon Gibson presents interesting field

observations from an Arctic expedition some years past. Water- and shore-birds were noted on these far northern summer grounds from the South at various dates in June, as follows: Glaucous Gull, June 2 to 10; Ringed Plover, June 5; Brünnich's Murre, Old Squaw, and Northern Eider, June 6; Red-throated Loon and Dovekie, June 8; Knot, June 11; Parasitic Jaeger, June 12; Sanderling, June 14; Arctic Tern, June 16; and Turnstone, June 21.

Joseph Grinnell in 'The Rôle of the Accidental,' points out that the occurrence of stray birds outside their range is a natural phenomenon incident to a possible occupation of new territory by a species. He would restrict the term 'accidental' to cases where a species has occurred but once. In the opinion of the reviewer this term, if quite so narrowly restricted, would lose some of its usefulness. On the other hand, it is doubtless frequently employed too broadly. A bird which has occurred sufficiently often in any territory to be expected again—for instance, the Arkansas Kingbird in the East—should not be called an 'accidental.'

McAtee gives a statistical study of the food of the Shoveller Duck; A. A. Saunders, a very thorough descriptive study of the songs of the Field Sparrow. R. C. Harlow in 'The Breeding Habits of the Northern Raven in Pennsylvania,' gives a considerable contribution to the life history of that bird. The date of the laying of its first egg is found to vary from February 22 to April 5. N. Kuroda and T. Mori, 'On Some New and Rare Birds from Corea,' is a short systematic paper in which two new subspecies are described. C. C. Sanborn, 'Recent Notes from an Old Collecting Ground in North-eastern Illinois,' gives annotations on some twenty-five species.

As usual 'General Notes' contains a variety of items of faunal interest. Pearson has had the good fortune to observe four Whooping Cranes in Texas in December, 1921. C. A. Urner gives full details of his observation of

Greater Yellow-legs at Elizabeth, N. J., in summer, already noted in the October *Auk* preceding. There is mention of storm-driven Longspurs in Colorado (Bergtold) and Nebraska (Bessie P. Reed). J. E. H. Kelso records peculiarly favorable observations on diving birds using and not using the wings under water. Items by C. W. Townsend and H. H. Beck touch on the interesting subject of bird music. In the latter case it should be noted that whereas the aerial music of the Wilson's Snipe is again ascribed to the birds' wings, the opinion that it is caused by the modified outer tail-feathers is rather well substantiated.—J. T. N.

EL HORNERO.—*El Hornero*, the organ of the Ornithological Society of La Plata (address Calle Peru, 208, Buenos Aires) has won its way to the first rank among magazines devoted to the study of birds. In the two issues now under review, Nos. 3 and 4 of Vol. II, Dr. Dabbene's scholarly review of the 'Petrels and Albatrosses of the South Atlantic' is a notable contribution to the literature of systematic and faunal ornithology. In No. 3, August, 1921, we have also 'Remarks on the Neotropical species of the genus *Anthus*' by C. E. Hellmayr, who describes three new forms. 'A List of the Birds of the Falkland Islands' by Richard H. Wace, who records the arrival of the English Spar-

row in vessels in November, 1919; 'Notes on Paraguay Birds' by Carlos Fiehrig, who records the discovery of a young Cuckoo (*Tapera naevia*) in the nest of *Philydor rufus*; 'Studies of Birds in Relation to Agriculture' by F. Lahille; Tubinares observed in the South Atlantic, by W. B. Alexander, and several pages of notes, news, and reviews.

In addition to the second part of Dr. Dabbene's paper, No. 4 (April, 1922) contains 'Notes upon Antarctic Birds,' by A. G. Bennett; 'List of Birds Collected in Las Eosas,' by J. B. Daguerre; 'Capture of *Thalassogeron eximius* in the Province of Buenos Aires,' by Roberto Dabbene, with a key to the group in which this species belongs; 'Birds in South American Folk-Lore,' by R. Lehmann-Nitsche, and 35 pages of notes, news and reviews. Obviously no working ornithologist should be without *El Hornero*.—F. M. C.

THE Essex County [Mass.] Ornithological Club issues a useful pocket check-list of Essex County birds. The method of arrangement places a maximum of information in a minimum of space and might well be employed for similar lists from other localities. Copies of this publication may be obtained from Ralph Lawson, Secretary, 88 Washington Square, Salem, Mass. The price is not stated.



WILD MALLARDS AT LAKE MERRITT, OAKLAND, CALIF.
Photographed by Tom Stevenson, September 15, 1921

Bird-Lore

A Bi-Monthly Magazine
Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES
Edited by FRANK M. CHAPMAN
Contributing Editor, MABEL OSGOOD WRIGHT
Published by D. APPLETON & CO.

Vol. XXIV Published October 1, 1922 No. 5

SUBSCRIPTION RATES

Price in the United States, one dollar and fifty cents a year;
outside the United States, one dollar and seventy-five cents,
postage paid.

COPYRIGHTED, 1922, BY FRANK M. CHAPMAN

Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

WHEN man takes a hand in regulating the affairs of nature he assumes responsibilities he often finds it difficult consistently to discharge. To his misguided efforts, for example, we owe the presence of the English Sparrow and Starling in this country, and are thereby confronted with feathered race problems which the economist views from one angle, the humanitarian from another.

When the Sparrows take possession of houses erected for Bluebirds and Martins and deny admission to the rightful tenants; when they crowd our feeding-stands and devour the seed designed for Purple Finches, Juncos, and White-throats, what part should we play? Neither bird is responsible for the presence of the other. The Sparrow does not know that he is a trespasser in our bird-houses and an unbidden guest at our feeding-stands. Why blame him?

Let us take another case. With food of many kinds and attractively placed baths, we spare no effort to induce birds to come about our homes. Finches and Sparrows of several species, Nuthatches, Woodpeckers, Chickadees, Jays, and other birds accept our invitation and we welcome them with enthusiasm. But the Hawk who helps himself to the bountiful supply of food he finds so temptingly assembled in our poultry-yards is shot at the first opportunity. How does the Hawk know that we have not prepared a feast for him as well as for the Juncos and Chickadees?

We have a friend in Florida who keeps a variety of stands and shelves on his lawn

filled with an unfailing supply of things birds love, and he is rewarded by visits from hundreds of Cardinals, Jays, Woodpeckers, Chipping Sparrows, Myrtle Warblers, Red-winged Blackbirds, and others who, to his delight, throng the place from morning to night.

He also has a small pool in which were many goldfish, and they, too, were recipients of his bounty. But one morning only half of them answered the food-call. Day by day their number grew less, and they had nearly all been made away with before a Little Green Heron was found to be the executioner. He was promptly killed, but how did he know that the invitation so cordially extended to other birds did not include him?

Thanks to an unfailing supply of food, natural and artificial shelter and the protection from feline enemies afforded by a cat-proof fence, birds have become increasingly abundant in Birdcraft Sanctuary. Every summer adds to the known population of nesting species and each winter the flocks of pensioners grow larger. But, as Mrs. Wright tells us in this issue of BIRD-LORE, the Sanctuary has become not only a home for harmless birds but a well-stocked hunting ground for predaceous ones. Crows rob the nests of eggs and young; Hawks are destructive; and last winter numerous raids were made by Shrikes. Is it justifiable to poison Crows and shoot Hawks and Shrikes?

In all the instances mentioned man is the primary cause for the conditions as related, and he should not shirk his responsibilities. In our opinion the question of humanitarianism is not the one at issue. If it were, it would certainly be more humane to kill one Hawk than to permit it to murder a dozen little Chickens, and a single Heron may be sacrificed to save a score of goldfish. If, therefore, responsibility compels us to sit in judgment on these cases, it seems to us that, basing our action on the principles of justice and fair play, and with due regard to the rights of the defendant as compared with those of the aggressor, we should protect our native birds from the English Sparrow; our poultry-yards from marauding Hawks, our fish-ponds from murderous Herons, and make our sanctuaries true havens of refuge.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by A. A. ALLEN, Ph.D.

Address all communications relative to the work of this department to the Editor, Cornell University, Ithaca, N. Y.

THE HOME-LIFE OF BIRDS

THE YOUNG BIRDS, THEIR GROWTH AND CARE

Young birds at hatching are of two general types. They are either precocial or altricial. Precocial young resemble young chickens in that they are wide awake when hatched, are covered with down, and are able, very soon after drying off, to follow their parents in search for food, a large part of which they find by themselves. Altricial young, on the other hand, are almost naked when hatched, their eyes are not yet open, and they are cared for in the nest by their parents for periods varying from a week or ten days with terrestrial Sparrows, to nearly a year with the Condor and the Wandering Albatross.

In general, terrestrial, diving and swimming birds have precocial young, while arboreal birds and birds that search their food on the wing, have altricial young. Among the former are the Loons and Grebes, the Ducks, Geese and Swans, the shore-birds, the marsh-birds, and the fowl-like birds. Some young, such as those of the Gulls and Terns, remain in the nest or, at least, have food brought to them for weeks, but in other respects are entirely precocial, being wide awake, covered with down, and able to run about shortly after hatching. Other young, such as those of Hawks, Owls, Nighthawks, and Whip-poor-wills, and even Herons, are covered with thick down when hatched but in other respects are quite altricial, being blind at first and quite unable to help themselves for a long time. At the opposite extreme among altricial young are those of the Flicker, the Kingfisher and the Hummingbirds, which are entirely naked. The majority of Woodpeckers have a few hair-like feathers when hatched, and Cuckoos have them quite thread-like. Young Cuckoos and Kingfishers are worthy of attention again when they come to attain their first real feathers for, unlike most birds, they remain in the sheaths until nearly full grown. For a time the young birds seem covered with tiny lead pencils, and the transformation to the fluffy feathers, by the breaking open of the sheaths, is very rapid, requiring but a few hours. With other young birds, the transformation from almost naked babes into fluffy feathered creatures is gradual. Whatever down there is, is pushed out on the tips of the incoming juvenal feathers which begin to break their sheaths before they are quarter grown. In the case of a Red-winged Blackbird, for example, the 'pin-feathers' have pushed the down entirely out and are well grown by the end of the fifth day, and on the sixth,

the sheaths of the 'pin-feathers' have begun to break. Three days later the feathers have unfolded sufficiently to hide most of the bare spots, and by the eleventh day the young bird is apparently fully feathered, except around the eye, which area, in Blackbirds, is the last to be clothed. Of course, the feathers continue to grow after the eleventh day, but the young bird has left the nest and is already able to fly short distances. The change, however, has been gradual, requiring several days, while in Cuckoos and Kingfishers it seems to occur within a few hours.

When the young hatch they are not fed immediately, the time elapsing before the first feeding varying with different species. The method of feeding likewise varies. Many birds are first fed by regurgitation. The parent bird swallows the food and gives it to the young in a partially digested state. Some, like the Mourning Doves and Goldfinches, continue this process as long as they feed the young. Herons and Bitterns do also, at least as long as the young are in the nest, and one never sees one of these birds returning to its nest with anything in its bill. Waxwings use their crops as regular market-



HERONS REGURGITATE THE FOOD INTO THE MOUTHS OF THE YOUNG IN THE CURIOUS WAY SHOWN HERE BY THE LEAST BITTERN

baskets and return to the nest with their necks bulging with a great variety of small fruits and insects, mostly in a good state of preservation. With the majority of common birds, however, this method of feeding is continued but a short time, if at all, and it is a familiar sight to see the parent birds returning to their young with insects or fruit in their bills.

The commonest method of feeding is for the old bird to put its bill, containing the food, far down into the throat of the young. This prevents any live insect from escaping. In birds that regurgitate food, however, there are

several different methods of transferring the food. In birds like the Pelicans and Cormorants, which bring back fish in their throat-pouches, the old bird merely opens its bill and permits the young to rummage around inside. Sometimes they almost disappear down the throat of the old bird. With the Herons, as shown in the photograph of the Least Bittern, the old bird turns its head on the side and the young grasps it with a scissors-like action, dilating its lower mandibles so as to catch whatever comes out of the throat of the old bird. To the onlooker, it appears like a very clumsy performance, but little food seems ever to be wasted by spilling. Young Mourning Doves have swellings at the corner of the mouth which the old birds press when they interlock bills to inspire the proper swallowing action of the young. I once tried to raise a crippled young Dove and could not get it to swallow anything, even that was forcibly put into its throat, until I discovered the nervous adjustment between the swellings and the throat muscles. After that it was easy, for I merely had to touch the swellings and it was like pressing a button. The little bird's mouth flew open and the throat muscles commenced to work even before the food entered the bird's mouth.

With all birds there is a nervous adjustment which prevents over-feeding. Birds do not feed their young in rotation, as one might expect, but ordinarily they feed the hungriest one first and continue to feed him until some other one gets hungrier and stretches its neck further and cries louder. This might result in overfeeding the largest young one but, fortunately, when the young bird has had enough, its throat muscles refuse to work. So after each feeding the old bird looks down into the throat of the young one (the young bird, if well, keeps its mouth open for food as long as the parent is about), and if the last bug is not promptly swallowed, she takes it out again and gives it to one of the other young. It is this habit of feeding the one with the longest neck and widest mouth first that results in the fatalities to the rightful young in a nest where there is a young Cowbird, for the Cowbird always has the longest neck and the widest mouth and gets all the food.

After the young have left the nest the old birds are not so particular about putting the food far down the throat of the young, for the young bird has soon to catch insects or find food for itself. It is interesting to watch a family of young Swallows learning to catch insects on the wing. So long as they are in the nest, they are fed like other young, having the food placed far down their throats, but once they leave the nest, such caution ceases. It is but a short time before the old bird merely sweeps by the young one and drops the food into the open mouth without stopping, and when the youngsters are able to fly, the same operation is employed in full flight. It is as though the old birds were teaching the young to catch things out of the air. Young Duck Hawks learn in much the same way to pounce on birds in full flight. When the young are able to fly, the old birds merely swing by the nesting-ledge with the food in their talons, and the young ones fly out, turn over beneath

the old bird, and strike at the food as though it was being carried along on its own wings.

The amount of food which birds, especially insectivorous species, require, is always a surprise to one observing it for the first time. The classical experiment of feeding a young Robin all the earth-worms it can eat at the time it leaves the nest can scarcely be improved upon. The result with the original



SWALLOWS ARE 'TAUGHT' TO CATCH INSECTS ON THE WING
At first the young are fed like other birds but after they leave the nest, the parents merely fly past them and drop the food in passing

Robin experimented with was that it consumed 14 feet of earth-worm in one day. Experiments with young Crows have shown that they require at least half their own weight of food each day merely to exist, and that they can easily consume food equivalent to their full weight each day. Many young Crows that are kept in captivity, as well as other young birds, are starved to death because their owners do not realize how much food is required. They

do not eat very much at a time but their digestion is so rapid that their parents feed them almost continuously from daylight until dark and, as Mr. Forbush says, they eat the equivalent of at least eight full meals each day. If one wishes to be duly impressed by the amount of food required by a young bird, he should put up an observation blind by a nest of young birds of almost any species. Quite naturally they do not require as much food when the young are newly hatched as when they are ready to leave the nest. Birds that feed by regurgitation and those which bring back large pieces of food naturally do not



A FEMALE CHESTNUT-SIDED WARBLER BROODING
Young birds must be protected from heat and from cold

feed as often as those which make the trips to the nest with only their bills full. Hawks usually feed only about once an hour; Hummingbirds, once in twenty minutes; but a pair of Chickadees that I watched at their nest last summer made 35 trips to the nest in 30 minutes. A pair of Rose-breasted Grosbeaks are recorded as feeding their young 426 times in 11 hours, and a House Wren, 1,217 times in the 15 hours and 45 minutes of daylight.

When the young are small, until they have developed their coating of feathers, they require frequent brooding by the old bird to keep them from getting cold and likewise to keep them from getting too hot if the nest is exposed to

the sun. Altricial young are never brooded after they leave the nest but precocial young are brooded for five or six weeks (or until they grow their juvenal feathers), wherever it strikes the fancy of the old bird, though seldom in the nest which they have left. A pair of Canada Geese, however, that I had in captivity, took their goslings each night back to the old nest to be brooded, though it was not much more than a depression in the ground. Florida Gallinules, and doubtless other marsh-birds, as well, often make new nests or rafts of rushes on which to brood their young. Wood Ducks, Grebes, and Swans often take their young on their backs and brood them beneath their wings. Indeed the Grebes often take this method of conveying their young to safety, closing their wings down tight upon them and diving with

them. The European Woodcock, on the other hand, is said to convey its young to suitable feeding-spots between its thighs, flying with dangling legs, and it is apparently a common practice with Rails to seize their young by any convenient appendage and rush them to safety.

The varying degrees of attachment for their young which birds show and their methods of expressing it are always interesting to observe. Few birds seem to feel much of a parental instinct when the young are freshly hatched. The instinct increases daily and reaches a maximum at the time the young are ready to leave the nest. The same is true of the bird's instinct to incubate. When the eggs are freshly laid the birds will desert them readily, but at the time they are hatching, even the most timid birds will cling to the nest in the presence of danger. Bird photographers should always bear this in mind and never try to photograph birds at their nests when they are just beginning to incubate or just beginning to brood. Most Hawks, Herons, Cormorants, Pelicans, Yellow-breasted Chats, and Mourning Doves have their parental instincts very poorly developed and readily desert their eggs or young in the presence of danger. Most Chickadees, and a great many Warblers and Vireos, on the other hand, have their parental instincts so highly developed that they pay no attention to dangers while they are incubating or brooding. At least they will permit of very close approach and even let you stroke them while they cling to the nest. Between the two extremes there are all gradations, no two birds behaving exactly alike in the defense of their nests or young.

Many birds feign being wounded in an attempt to lure one away from the nest and drag themselves pitifully over the ground in the hope that the enemy will follow them and lose track of the nest or young. Other birds dart at one's head and attempt to inflict blows with their bills, their wings, or their talons, while the majority merely express their distress by loud calls which attract all the other birds to the vicinity.

It is interesting to observe the varying times at which fear first develops in the young birds. It is apparently instilled into them by their parents, for when eggs from wild birds are hatched under domestic birds, the young seem never to develop the sense of fear for human beings. There are some exceptions to this statement, however, especially among precocial birds which are extremely timid even when hatched under most quiet hens and lose their fear very gradually. In the wild state, precocial young seem to respond to this



A BABY RUFFED GROUSE TWO DAYS OLD
A good example of a precocial young, well covered with
down and wide awake when hatched
Photographed by A. A. Allen

fear instinct as soon as they have dried off and are able to run. With altricial young, on the other hand, it is not until they are developing their feathers, a few days prior to leaving the nest, that they crouch and try to hide at one's approach. Before that time, they stretch up their necks and open their mouths for food just as freely for a human being as for their parents. At about the same time the young birds apparently come to a realization of the meaning of



MOST BIRDS PLACE THE FOOD FAR DOWN IN THE THROATS OF THE YOUNG, AS SHOWN WITH THE RED-WINGED BLACKBIRD

the different calls of their parents and crouch for one note, stretch up their necks at another, or remain passive for a third. Anyone at all familiar with poultry knows of the various calls of the old hen to her chicks. Her vocabulary is not extensive but no one would deny the fact that she has a method of conveying many different instructions to her chicks. They all crouch when she cries 'hawk,' they scatter when she cries 'cat,' and they rush to her when she cries 'food,' etc. Other birds are just the same but it takes a discerning ear to catch the differences in notes, and it is impossible to put them in print. Distress calls are usually recognized by all species of birds and they fly to the scene of trouble. Whether the other notes are understood by all species, or whether each species has its private language, we

have no very good way of knowing. It is a study that will take a refinement of observation that we have not yet attained, and there is no need of theorizing here upon a subject for which we have so few facts.

It is said that the call-notes of a bird are instinctive and that its song is learned by imitation, but the latter fact has not been entirely proved. Cer-

tainly a Crow will caw and a Duck will quack whether or not it ever hears any others of its kind, and I am inclined to the belief that a Robin would sing like a Robin if it never heard any other bird sing. But when young birds are raised by other species, never hear their own kind and continually hear the songs of their foster parents, they do seem to acquire songs resembling more those of their foster parents than their own. We should remember, however, that the power of imitation is quite general among birds and not confined to the Mockingbirds alone, though with them it reaches its greatest perfection. The only fair test would be to raise a young bird to the singing stage without its hearing any other song and, to the best of my knowledge, this has never been done.

All young birds by the time they leave the nest have well-developed distress-calls and food-calls. Some young, like the Baltimore Orioles and the Florida Gallinules, never stop calling except when notified by their parents that danger is near. Other young call when they are hungry or think they are lost, and thus, though the brood may be quite scattered, the parents are able to keep track of them. Many persons, finding a young bird without its parents, think it has been deserted and feel that



AFTER FEEDING THE YOUNG, THE FEMALE ORDINARILY CLEANS THE NEST, AS SHOWN BY THIS FEMALE REDWING

they must take it home and feed it. This is a mistaken kindness for, usually, it merely signifies that the brood is somewhat scattered, and that the parents are busy feeding the other young; particularly, if the young bird is quiet, for that indicates that he has just been fed and that the old birds may not be back for some time. If the young bird is put up out of reach of cats, the parents will sooner or later find it and care for it,

for its food-call will carry as far as it could possibly have flown since its previous feeding.

The syrinx of a young bird, and therefore its song, does not develop fully, ordinarily, until the winter or following spring, though I believe there are instances of domesticated song-birds singing the same year they are hatched. It is not the case with wild birds, however, though some of the shaky voices that we hear in the fall may possibly be from early hatched birds.

The time required for the young bird to acquire its full plumage varies with different species. Ordinarily, by the time the wing-feathers are full grown, the body feathers of the juvenal plumage begin to drop out and the first winter feathers come in. If the male and female are alike, this plumage, which is usually fully acquired by September, will be almost indistinguishable from that of the adults, but, in brightly colored birds where the male and female are different, it will resemble the female or the male in winter plumage. The next spring it will have a complete or a partial moult of its body feathers to bring it into its breeding dress just as in the adult. Immature Scarlet Tanagers, Goldfinches and Indigo birds then closely resemble the adults, being only slightly less brilliant. With some of the Warblers, however, like the Redstart and Myrtle, there is but a slight moult and the immature male still resembles the female with a few of the male feathers. This often results in the recording of female birds singing. Some birds seem to require even more than the two years to acquire the full brilliancy of plumage, but ordinarily, after the second year, the health of the bird will affect its plumage more than its age.—A. A. A.

QUESTIONS

1. What is meant by altricial young and what groups of birds have altricial young?
2. What is meant by precocial young and what groups of birds have precocial young?
3. Describe the covering of as many young birds as you have observed.
4. How do young Cuckoos, Kingfishers, and Chimney Swifts differ from other altricial young?
5. How long does it take for young birds to acquire their juvenal plumage? Have you ever made any observations of your own upon the time spent in the nest by young birds?
6. What is meant by regurgitation? How long are young birds fed this way?
7. Describe other methods of feeding the young employed by birds?
8. What prevents young birds from being overfed?
9. How much food do young birds require? Have you ever made any observations of your own upon the number of times a nest full of young birds are fed?
10. How long are young birds brooded and what is the purpose of brooding?
11. In what ways do birds express their attachment for their young?
12. When does the fear of man develop in young birds?
13. What would you do with a young bird if you found it apparently without parents?
14. How long does it take for young birds to acquire their full plumage?

FROM YOUNG OBSERVERS

A MENTALLY DEFICIENT ROBIN

Last spring a female Robin chose, as the site for her nest, the flat top of a pillar on the piazza of a club house at Lake Wickaboag, West Brookfield, Mass. It was an ideal place for a nest, and we, who were her observers, thought she showed great wisdom in selecting it.

She was very industrious and, the first day, brought quantities of twine and dry grass with which to build her home. Her mate contributed very little to the actual house-building but he sang his sweetest to cheer his spouse as she worked. It seemed as if the nest would be completed within two days.

To our surprise, however, the next morning the nest material was strewn all over the piazza and the lawn, and Madame Robin was busily engaged in picking it up and replacing it. We thought that perhaps rats had upset it, and we admired the bird for her courage in starting all over again.

The same misfortune came to light the following day and we decided to investigate. On examination of the nest, we found that the bird had not used the mud which characterizes the average robin's abode, and consequently the night winds from up the lake had wrought havoc with the light, unattached material.

After a day or two her mate disappeared and did not return. She was persistent and even tried the top of another pillar, but she had no greater success. Her efforts went on fruitlessly for three weeks. Then she suddenly disappeared and we saw no more of her.

This incident has been a source of discussion among those who witnessed the persistent effort of the bird, and we have come to the conclusion, finally, that she was mentally deficient. No other solution seems plausible. She certainly had the desire to build but evidently did not have the ability. Her mate discovered it early and instead of helping her, simply deserted her for a more capable wife.—JOHN H. CONKEY, *Boston, Mass.*

[Interesting episodes like this are usually difficult to explain. The Robin may have been mentally deficient but even a normal Robin would have difficulty in combating any agency that destroyed its nest at night when it could not know what was happening. Robins ordinarily begin their nests with a platform of straws before adding the mud, and immature birds, building for the first time, are often slower about beginning the mud layer. This may have been an immature bird, though the persistence of its attachment to the nesting-site indicates maturity. Incidentally, its persistence in nest-building, even after the disappearance of the male, is a good example of the attachment of many birds to the nesting-site, rather than to the mate, as mentioned in the last issue of this department.—A. A. A.]

KILLDEERS IN NORTHERN NEW JERSEY

I feel quite proud this year, for I have found and watched the nest of a bird very rare in this vicinity. (I live on a farm on Chestnut Ridge, on the

northeastern boundary of New Jersey.) Last year the first Killdeer's nest that I know of was found on a neighboring farm.

All this spring we noticed the Killdeers calling in our meadow and around the fields. For a while we kept one of our horses grazing in a large field before it was plowed. One day the Killdeer became frantic, screaming '*Kill-dee-er, Kill-deer*' right before him. It was easy to guess that they must have a nest near by. When the horse went away, they stopped calling. Soon we found the bird leading the calf away. She ran a few steps, then fell down on the ground, flapping her little brown and white wings as if wounded. The calf followed and smelled her to see what she was. The Killdeer jumped up and pecked the calf's nose, then ran off again.

The next day, my mother saw the bird right between the horse's feet, lying still, but screaming as loudly as it could. She decided the nest must be there, so she went to the spot. The Killdeers, unlike the friendly Catbirds and Robins that nest near our house, were more afraid of her than of the horse. They screamed louder and louder as my mother approached, and tried their best to attract her away. She drove the horse away and found the nest.

The nest consisted of a shallow depression in the ground, with a few roots and dry, brown weeds. There were four eggs, arranged with the points toward the center. The eggs were a rather muddy light gray, with thick speckles and scrawls of a dark, greenish brown. It was April 12, 1922, when we found the nest and the eggs did not hatch until May 6.

The young were very funny little creatures, that matched their surroundings so well that they could hardly be seen. About four hours after the first egg hatched, they had all left the nest. The next afternoon, we found them down in the swamp. They looked somewhat like little Quail except that their legs were much longer. Their shape and manner of walking reminded me of young Sandpipers. When we found them, they were following their mother just as a brood of chicks follows the hen. The mother pulled up worms, and got other things for them to eat. Already they had learned to hide. Whenever anyone approached, the old bird screamed a shrill '*Ee-ee!*' Immediately the young would scatter and each would settle down beside a stone. It was practically impossible to see them unless they moved.

We saw them quite often afterward in the meadow. The other day, my father saw a flock of eight. Evidently they had been successful in raising the whole brood in spite of Hawks, Crows, and other dangers. I cannot understand how they escaped, for, in spite of every precaution, we lost many chicks and little goslings. Now, one of our neighbors says he has found another flock of little Killdeers.

The Killdeer is very different in character from most of the birds that build near our home. He is not nearly so friendly, for one thing. We have nests of the Baltimore Oriole, the Catbird, the House Wren, the Robin, the Song Sparrow, the Yellow Warbler, the Least Flycatcher, the Barn Swallow,

the Cliff Swallow, the Chewink, the Flicker, the Redstart, the Chipping Sparrow, and several others very near the house and barn. All of these birds seem to know a friend immediately. If we go out to rescue any one of these from danger, they stop calling and seem perfectly confident. The Killdeer, on the contrary, becomes more afraid than ever if anyone tries to help her. Its call grows louder and more plaintive until it becomes a despairing scream. In spite of this apparent fear of man, it builds in our fields, within a very short distance of our house and barn. At all hours of the day and night, the sad, plaintive call of the Killdeer is heard. It has a very weird sound when heard in the middle of the night, suddenly breaking the silence. I value this new acquaintance more because of its total difference from all of my other bird friends.—RUTH M. BAILLIE, (Age, 17 years), *Allendale, N. J.*

[Let us hope that the Killdeers will return to this farm where they are so well cared for every year, and that Miss Baillie will continue to make the most of her opportunity to observe them as she has done this year.—A. A. A.]



CATBIRD FEEDING YOUNG
Photographed by Joseph Pollak, Carman, N. Y.

HERONS OF THE UNITED STATES

By T. GILBERT PEARSON

The National Association of Audubon Societies

BULLETIN NO. 5

REDDISH EGRET (*Dichromanassa rufescens*)

DESCRIPTION.—There are two very distinct phases of plumage found in Reddish Egrets. One that we may call the 'dark phase' is by far the more common in this country (see Plate I, No. 1). In this plumage the feathers of the head and neck are rufous chestnut, while the back, wings, and underparts are of a bluish slate-color. From bill-tip to tail-tip it measures pretty close to 30 inches, or about 7 or 8 inches more than the Little Blue Heron, which at a little distance it strikingly resembles.

The other plumage may be described as the 'white phase' (see Plate I, No. 2). Every feather on the bird is pure white. This astonishing difference in plumage between individuals of the same species has never been satisfactorily explained. Neither age, sex, season, nor environment appears to have anything to do with determining which plumage an individual bird shall wear. Out in the village of rude stick nests, of the many eggs that hatch, here and there are those that will produce baby birds destined to wear white plumage all of their days. In both phases the birds in the breeding season are adorned with long white aigrette plumes growing from the back.

At one time the white bird was supposed to be a distinct species and was called Peale's Egret.

RANGE.—Reddish Egrets are found in the Bahama Islands and the West Indies, as well as on the Pacific Coast of northern Mexico and along the Gulf Coast to Guatemala. No other Heron has so restricted a breeding range in the United States. So far as we are aware it is now known to rear its young in this country only on islands in the bays and lagoons along the Gulf Coast of southern Texas, from near the center of Cameron County to Mesquite Bay in Aransas County, a distance of only 125 miles. Unmated birds wander northward as far as Louisiana, but it is doubtful if they breed in that State. Many years ago the species was not uncommon in southern Florida, but apparently no occurrence of its breeding in this State has been recorded for a long time. So far as known, it is found in Texas only about salt waters or those that are brackish. Apparently it always remains in the immediate coast country.

GENERAL NOTES.—In the office of the National Association of Audubon Societies it had long been feared that the Reddish Egret had become extinct as a breeding bird within the borders of the United States. It was, therefore, a delightful surprise to the writer to discover on June 20, 1918, a colony of

these interesting birds on the Second Chain-of-Islands, lying between Mesquite Bay and San Antonio Bay, Texas. This was at a spot about twenty miles north and east of Rockford. These islands were at that time twelve in number and all small, the largest being not over two acres in extent. Typical of all the islands along that coast, they were composed of mud, sand, and oyster shells. They were covered more or less with stunted mesquite, yucca, and prickly pear cactus. Nearly all were occupied by breeding birds.

Nests of the Reddish Egrets and various other Herons were scattered everywhere among the cactus and other bushes, at heights varying from



REDDISH EGRETS IN THE ROOKERY ON SECOND CHAIN-OF-ISLANDS, GULF COAST OF TEXAS. YOUNG LOUISIANA HERONS ON NEST IN LOWER LEFT-HAND CORNER

Photographed by William L. and Irene Finley

eight inches to seven feet from the ground. Of the Reddish Egrets, it was estimated there were 1,250 pairs in the colony. Many nests contained four or five blue eggs, and numerous young were running about in the bushes or along the narrow beaches.

Two years later, on June 21, 1920, I again visited this group of islands, this time in company with Mr. and Mrs. William L. Finley. The heavy growth of cactus and thorny bushes had largely disappeared, leaving only a few dead mesquites. Most of the nests, therefore, were built on the ground or on drift matter carried in by the sea. On one island many were built on wild sunflower plants at heights varying from one to three feet from the ground. The island had also been greatly reduced in size by the ravages of storm-tides. Only six of the islands were this year occupied as nesting places by the various Herons. I estimated the Reddish Egrets to be present to the extent of about 500 pairs. Among the hundreds of young climbing about the nests or running

through the weeds underfoot, only one in the white phase was found, and only one white adult bird discovered, the latter lying dead on the ground by its nest.

Bird Island, in the northern part of Laguna de la Madre, some distance below Corpus Christi, yielded two nests of the Reddish Egret, and six birds were seen. Both nests were on the ground.

In Brownsville I was informed by R. D. Camp that on Green Island, lying in the Laguna, 32 miles north of Point Isabel, he had, the autumn before, observed the remains of a number of dead young Herons scattered about under the bushes, which he thought indicated that Herons had been breeding there.

On June 3, 1920, in company with Mr. Camp and George C. Shupe, of San Antonio, a visit was made to this spot. The island is several acres in extent and the higher portions are very densely covered with mesquite, prickly pear cactus, maguey, and Spanish bayonet. It proved to be the breeding ground of a very large colony of Herons. This certainly was the home of 5,000 water birds—possibly twice that many. The most numerous species was the Reddish Egret. Here thirteen adult birds in the white phase of plumage were counted, most of which were observed as the birds came in the evening.

Mr. Camp, as a representative of this Association, guarded the Green Island Heronry throughout the breeding season of 1922. He estimated the number of Reddish Egret nests this year to be about 1,800.

One very characteristic note of the Reddish Egret which I noticed, both at the rookeries and on the feeding grounds, is a bugle-like cry, decidedly more musical in its nature than the ordinary Heron squawk. It is to be hoped that this large, handsome bird may not only continue to be numerous on the southern coast of Texas, but that through protection and good fortune its numbers may increase so that they may again adorn the coastline of our entire southern country.

LITTLE BLUE HERON (*Florida cærulea cærulea*)

DESCRIPTION.—There are three distinct phases of plumage in the Little Blue Heron, and confusion in the matter of identification, therefore, is frequent.

Dark Phase (Plate I, No. 5).—What is supposed to be the fully adult plumage in all instances is represented by the bird whose head and neck are maroon-chestnut, while all the rest of the plumage is dark bluish slate-color.

White Phase (Plate I, No. 3).—All Little Blue Herons while young are covered with white down. When the feathers come, the plumage is pure white with the exception of the tips of the long wing-feathers (primaries) which are washed in very dark blue. The skin of the legs and feet is greenish yellow. The birds remain in this plumage for two years, although it has been suggested that some individuals may continue in the white phase throughout life. The writer has often found white Little Blue Herons sitting on eggs or caring for their young. One should not, however, regard this as evidence that the birds are more than two years of age, as some other species are known to

breed while still dressed in immature plumage. These white birds often are mistaken for Egrets, and many of the reports that come to the office of the National Association, telling of the occurrence of 'Egrets,' undoubtedly refer to the Little Blue Heron in the white phase. During July and August many of them wander northward for a time and are often seen as far as New England. These northward summer migrations seem to be undertaken almost entirely by the white birds, a blue one very rarely being reported. Upon the approach of cold weather they retire again to the South.

Pied Phase (Plate I, No. 4).—When the bird is changing from white to dark plumage it assumes a most unusual appearance. The molting takes place very gradually. The white feathers drop out a few at a time, their places are quickly taken by dark ones, and the bird soon acquires a polka-dot appearance. At first it is a white bird with dark spots scattered about over it, but these spots increase in number until in time we have a dark bird with only a few white spots visible. By autumn the new plumage is fully acquired, the skin of the feet and legs having meanwhile become black.

The size of the bird appears not to vary in its different aspects of plumage. An average specimen is 22 inches long; the wing (from outer joint to tip) is $10\frac{1}{4}$ inches long, and the bill is 3 inches long.

RANGE.—The third edition (revised) of the 'Check-List' of the American Ornithologists' Union gives the following reference to the range of this bird:

"North and South America. Formerly bred from Missouri, Indiana, Illinois and New Jersey to western Mexico and south to Argentina and Peru; in the United States now breeds locally on the Gulf Coast and in South Carolina; wanders casually to Nebraska, Wisconsin, Ontario, New England, and Nova Scotia; winters from South Carolina southward."

The territory given as its breeding range in the United States is inadequate, and to many may be misleading. The Little Blue Heron is rarely if ever common along the sea beaches of the coast. It is mainly a bird of fresh and brackish water areas.

The writer has visited nearly every known breeding colony of water-birds on the islands along the Gulf Coast of the United States, and has no recollection of ever having seen a Little Blue Heron's nest in one of them. Their nesting places may be found at various points in the Gulf States, but not actually on the coast. There is a colony at Avery Island, Louisiana, but that is many miles from the sea beaches and the nesting place is in a fresh water pond. On the Atlantic Coast the birds breed on Cumberland, St. Catherine's, and Ossabaw Islands on the Georgia Coast, but these are very extensive islands with numerous fresh and brackish water marshes where the birds may seek their food. The same statement may be made of the colony that has long been established on Craney Island in Carteret County, N. C. A possible exception to this rule may be found in the colony reported to occupy a little island in Mosquito Inlet Bird Reservation, near Daytona, Fla.

To find most of their breeding colonies one must search inland. In May, 1921, the writer visited twenty-one colonies of Herons, all situated in a small group of counties lying almost exactly in the center of the northern part of the Peninsula of Florida. These were the counties of Alachua, Marion, Putnam, Clay and Lake. I once visited a populous breeding community near Red Springs, Robeson Co., N. C., 75 miles in a direct line from the coast. For thirty years at least, Little Blue Herons have gathered annually in a breeding place on the Orton Plantation, Brunswick Co., N. C. This is about 15 miles inland. I have found them breeding elsewhere in North Carolina, South Carolina, Florida, Mississippi and Louisiana, but invariably some little distance back from the coast. In the Heron colonies of the coastal country of Texas, the Little Blue Heron has not been found during recent trips to the region. Dr. E. W. Nelson has written that there is a colony in 'southeastern Missouri,' and W. D. Howser, a few years ago, reported a breeding place on Reelfoot Lake, Tenn.

GENERAL NOTES.—This species inhabits much of the extensive marshlands in our Southland. When traveling through the pine barrens of our South Atlantic and Gulf States, one will often come upon shallow ponds or small lakes whose margins and shallow reaches are more or less grown over with various water plants and scattered bushes; farther out the leaves of the water lilies are usually much in evidence. About the pond the bare grasslands, or prairies, extend from 100 feet to many hundreds of yards. Here is the natural and favorite feeding ground of the Little Blue Heron. Singly, or in small flocks, they may be seen wading slowly along in the shallow water or standing stationary with heads erect, watching the intruder from a distance.

Their food consists of water insects, frogs, and especially minnows that swarm in such regions. Sometimes these lakes contain islands covered with buttonwood or willow bushes, and these frequently are chosen as nesting sites for various Herons of the neighborhood. Other favorite breeding places of the Little Blue Heron are the small ponds in dense hammock lands that surround many of the lakes. Here, in the heavy semi-tropical forests, one may find quiet little ponds thickly grown with bushes, and such places the Herons love.

Their nests are composed of coarse sticks, with usually a slight depression at the top, and lined with finer twigs. One may find them situated all the way from 4 to 15 feet above the water—rarely higher than this. They are very sociable in their nesting habits, and the cradles with eggs may often be found within two or three feet of one another. Several species of Herons usually assemble in a nesting colony, and sometimes one may find a number of Water Turkeys also associated with them. Little Blue Herons are known to breed in the 'immature' or white phase of plumage, and in most southern heronries some of them will be seen in attendance on their young. Near Levy Lake, Fla., I once found a heronry composed entirely of white Little Blue Herons.

About sixty nests were counted and not one individual in the adult blue plumage was observed.

The dull blue eggs are generally four or five in number and it is supposed to require about three weeks for them to hatch. Herons are very noisy birds around the rookeries, and especially when the young have hatched and grown strong enough to add their clamor to the general uproar, the cries may be heard at times for several hundred yards.

The chief natural enemy of this species, as well as of our other southern Herons, is the Fish Crow. Numbers of these black bandits stay in the neighborhood of every rookery. In fact they light among the bushes and, hopping from limb to limb, peep and watch until they see a Heron leave its eggs and then, often before its mate can take its place, the Fish Crow dashes in, thrusts its bill into an egg, and with it thus transfixed, flies away to some favorite limb to enjoy its ill-gotten booty.

Little Blue Herons, in common with the other Herons of our southern rookeries, are almost always known as Cranes. You will hear them spoken of as 'White Cranes,' or 'Blue Cranes,' or 'Spotted Cranes.' In eastern North Carolina this species is frequently called the 'Scoggen.'

SNOWY EGRET (*Egretta candidissima candidissima*)

DESCRIPTION.—The plumage of this Heron is pure white, (see Plate I, No. 6). Growing from the region of the upper back are about fifty delicate plume feathers known in the millinery trade as 'cross aigrettes.' These usually are about 8 or 9 inches in length and recurved at their tips. They constitute a distinctive nuptial adornment, although, as a rule, they are not shed for a considerable time after the young have left the nest. Mr. Lee Crandall tells me that Snowy Egrets kept in captivity in the New York Zoölogical Gardens acquire their plumes in December, and that with the exception of the loss of an occasional feather, they are not shed until about September 1. This statement, of course, refers to birds kept in unnatural conditions. The exact length of time in which they are worn in the state of nature has, so far as I am aware, never been fully determined.

The bill of the Snowy Egret is very black, with a little yellow at the base. The legs also are black and the feet are bright yellow. From the end of the tail to the bill-tip, this bird measures about two feet.

RANGE.—The principal range of the Snowy Egret is tropical and sub-tropical America, though to some extent it also breeds in temperate regions. At one time it was known as far north as New Jersey, Illinois, Nebraska and Oregon. To the south it extends to Chile and Argentina.

Due to persecution, its range in the United States has been greatly reduced. For the past twelve years the National Association has exerted much effort in seeking out and employing men to guard the few remaining breeding places

of these birds in our country. During the summer of 1922 our guards protected ten colonies of Snowy Egrets. They were distributed as follows: One at Craney Island, east of Beaufort, Carteret Co., N. C.; one at the reservoir of the Santee Club, one at Penny Dam Reservoir, and one at Grimball's Buzzard Island, Charleston Co., S. C.

In Florida, colonies were protected at Orange Lake, Levy County; west of Micanopy in Alachua County; and San Sebastian River colony in St. Lucie County.

In Louisiana, one colony was guarded in West Feliciana Parish; and one in Cameron Parish.

In Texas, birds were breeding in our protected Reddish Egret colony on Green Island, Cameron County.

In addition to the above there were colonies of nesting birds on Orton Plantation, Brunswick Co., N. C. (*Bird-Lore*, 1920, p. 255); and on Ossabaw Island, Chatham Co., and St. Catherine's Island, Liberty Co., Ga. (*Bird-Lore*, 1922, p. 185). They were also undoubtedly breeding on Cumberland Island, Camden Co., Ga. ('Wilson's Bulletin,' June, 1922, p. 85); at Avery Island, Iberia Parish, La.; and at Wolf Point Ranch, Matagorda Co., Texas (*Bird-Lore*, 1920, p. 321).

William Leon Dawson reported (*The Condor*, 1915, p. 97) on May 26, 1914 a small colony in Merced Co., Calif.; and Dr. E. W. Nelson has written me of a breeding place at the mouth of Bear River in Utah. During recent years they were also reported breeding on Mosquito Inlet Reservation, Volusia Co., and at Passage Key Reservation, Manatee Co., Fla.

Most of these nesting plates are in the immediate vicinity of the coast or the swampy lowlands of the coastal plain. I know of only one in the Southern States that is situated as far as 90 miles inland. This is in a place known as 'The Burn,' about 30 miles south of Natchez, Miss. (*Bird-Lore*, 1920, p. 259.)

GENERAL NOTES.—It is the custom of most American Herons while feeding to stand motionless and allow their prey to swim up to them, or with great care move slowly through the shallow water, therefore giving the appearance of sedateness and great dignity. The feeding habits of the Snowy Egrets are noticeably different. They rush on their prey and turn and dart about in an extremely active manner. While thus engaged, with wings half raised and plumage fluttering in the wind, they present a most charming and animated sight. Like all other Herons they feed on such small life as they can capture along the margins of ponds and sloughs. They are particularly fond of minnows and, like the Little Blue Heron, feed their young chiefly on this diet. The fish and other prey are never carried in the bill. It is always swallowed as quickly as captured and later is regurgitated into the throats of their young. They make long flights in quest of food, sometimes going as far as 15 miles or more from the heronry for this purpose.

They assemble to breed with others of their kind in heronries, usually called

'rookeries.' One seldom, if ever, finds them breeding by themselves; that is to say, there are usually other species of Herons present. The nests, placed in low swamp-trees or bushes, are rude affairs made of sticks and twigs, and the four or five blue eggs are usually indistinguishable from those of the Little Blue Heron. While feeding they are generally silent, but about the nest sometimes emit squawks and guttural notes, especially when engaged in combats with their neighbors. In watching them in the colonies I have often thought they must possess an irritable nature not usually exhibited by the more sedate Little Blue and Night Herons.

On visiting a Heron rookery one unfamiliar with the habits of the birds



SNOWY EGRETS IN THE BREEDING COLONY AT ORANGE LAKE, FLORIDA, WHICH IS OWNED AND PROTECTED BY THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

Photographed by O. E. Baynard

may easily get an inadequate idea of the numbers resorting there. During the day many are away feeding. The birds are coming and going all the time, hence one can learn of the full number only when the whole population assembles. It is a fine sight to watch them coming in to roost. Singly or in scattered flocks numbering from two or three up to a dozen or more, they appear flying high or low according to the surroundings and strength of the wind.

At Orange Lake, Fla., they often approach the breeding island, flying at a height of only 4 or 5 feet above the water. When the colonies are in little ponds closely surrounded by high forests the birds must necessarily fly in over the tree-tops and then drop down to their nests. A situation somewhat similar to this exists at Avery Island, La., where Edward A. McIlhenny, by

exercising ingenuity, based on a knowledge of the habits of the birds, has built up a colony of perhaps 2,000 nesting Snowy Egrets almost in his dooryard. Late in the afternoon these and other Herons of the colony begin to arrive in numbers. Standing with Mr. McIlhenny on his lawn I have seen the birds arriving at a height of from 100 to 200 feet, until nearly over their nests, then with wings partly closed they volplaned almost to the bushes. A few vigorous wing-beats, and they would settle among the assembled hosts. Flocks of these snowy creatures dropping from the sky make a stimulating and most charming spectacle.

This is one of the birds that has been extensively shot by agents of the feather trade, the result of which has been that but for the active efforts put forth to guard their nesting places, the species would probably be on the very verge of extinction in the United States today. Thanks to the liberality of members of the Audubon Society and the friendly guardianship afforded by a few private individuals, there are still some thousands of these beautiful creatures left in our southern country, although their numbers have not materially increased in the United States even under protection the past ten years. Many people still shoot them when they have the opportunity, and Fish Crows are ever on the lookout to take their eggs.

It would appear that the preservation of the species can be assured only by a persistent effort of guarding their nesting and feeding territories.

If this can be continued without interruption until the rising tide of interest in bird protection can penetrate the minds of the people dwelling about the haunts of the Snowy Egret, its numbers may again increase and the species be saved to our country.

(To be continued)



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, President

Address all correspondence, and send all remittances, for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City. Telephone, Columbus 7327

THEODORE S. PALMER,	T. GILBERT PEARSON, <i>President</i>	WILLIAM P. WHARTON, <i>Secretary</i>
FREDERIC A. LUCAS, <i>Second Vice-President</i>		JONATHAN DWIGHT, <i>Treasurer</i>
	SAMUEL T. CARPER, JR., <i>Attorney</i>	

Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF REQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York

NOTICE OF ANNUAL MEETING

The annual meeting of the National Association of Audubon Societies for the Protection of Wild Birds and Animals, will be held in the American Museum of Natural History, New York City, on Tuesday, October 31, 1922, beginning at 10 o'clock A. M.

There will come before the members at this time the reports of the President and Treasurer. Verbal reports will be made by various Field Agents and delegates from affiliated organizations.

The selection of two directors also will be considered, as the terms of Dr. Frank M. Chapman and William P. Wharton expire at that time.

The annual meeting is always a source of

interest and inspiration to those who attend, as the exchange of ideas and experiences among those engaged in the same line of endeavor in widely separated fields is always stimulating to the participants. It is to be hoped that as many members as possible will plan to be present on this occasion. All others interested in the purposes of the Association are welcome.

On the evening of Monday, October 30, in the large lecture hall of the American Museum of Natural History, there will be held a public gathering at which various speakers will appear. Slides and moving pictures will be presented. This public meeting usually attracts a large audience.

FINLEY COMING EAST

There are many who will learn with pleasure that William L. Finley, of Jennings Lodge, Oregon, is coming east again this winter on a lecture tour. He plans to leave Oregon about December 1, and to return in March or April.

The names of William L. and Irene Finley are inseparably associated with the presentation of many of the most attractive

moving picture films of wild life that have ever been taken in this country. As lecturer before the National Geographic Society, National Association of Audubon Societies, Columbia University, and numerous Audubon Societies, bird clubs, sportsmen's organizations, and colleges throughout the East, he is well known to many hundreds of most discriminating audiences. He is now making

lecture appointments. Those who desire to obtain his services may communicate with Mr. Finley at Jennings Lodge, Oregon, before December 1, 1922, or write directly to

the office of the National Association of Audubon Societies, 1974 Broadway, New York City, where he will make his headquarters while in the East.

ENFORCING GAME LAWS IN MAINE

Some weeks ago Mr. and Mrs. Carl A. Sutter, of Maine, decided to answer the back-to-nature call by going into the woods and seeing if a living could be wrested from Nature in the old cave man manner. Later newspaper reports told of the wonderful time they were having and remarked that partridges and venison were to be found before their camp. A member of this Association reading this press account, wrote to ask whether, if it were true, these people should be allowed to thus violate with impunity the game laws of the State of Maine. The Department of Inland Fisheries and Game, of Augusta, was immediately communicated with and under date of August 12, 1922, Myrtle A. Hodgson, Chief Clerk of the Department, reported as follows:

"As soon as the Department learned of the alleged violation of our inland fish and game laws by these parties, two of the most experienced officers and woodsmen in the State were detailed to investigate their activities and take such action as the law required, these wardens being Howard Wood Patten, Chief Warden of the Northern Penobscot and Southern Aroostook Districts, and Fred E. Jorgensen, of Masardis, Chief Warden of the Central Aroostook District. As the result of their investigations,

prosecution was instituted against the Sutters as follows:

"On June 9, 1922, before the Houlton Municipal Court, Carl A. and Margaret L. Sutter, of Brockton, Massachusetts, were fined \$25 and costs each, for unlawful hunting without a license. The costs amounted to \$15.95.

"On the same date, the same parties were prosecuted before the same court for fishing without a license, each being fined \$10 and costs, the costs amounting to \$16.17.

"Same day, in the same court, same parties were prosecuted for having partridges in possession in closed time, each being fined \$10 and costs, the costs being \$16.17.

"The same day, before the same Court, same parties were prosecuted for camping and kindling fires in an unorganized township without being in charge of a registered guide, as is required by law; both pleaded guilty and they were fined \$40 each and costs; the costs amounted to \$16.97.

"The same day, before the same Court, the same parties were prosecuted for hunting and killing deer in closed season; fine of \$50 each was imposed, and paid, and costs taxed at \$16.17.

"From the above extract from our records, I think you will agree with me that our wardens took prompt and effective action."

SAVING BIRDS AT LIGHTHOUSES

It is generally known that many lighthouses, erected as beacons of warning to human navigators, on the other hand serve as lures of destruction to migratory birds. For many years bird-lovers sought to devise some means to prevent this great loss of life. It is to a Dutchman, Dr. Jac. P. Thijssse, that credit must be given for discovering a practical method of dealing with this situation.

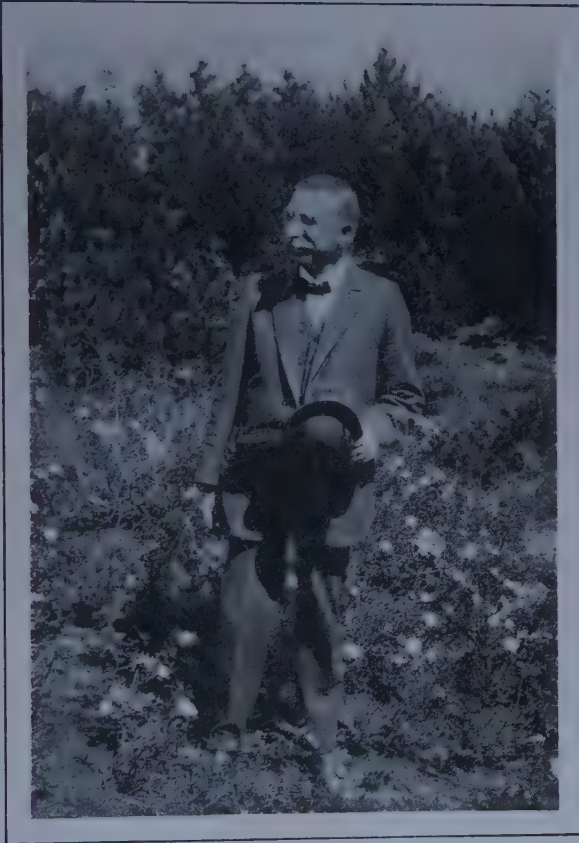
It was at the home of Dr. A. Burdet, in

Overveen, Holland, that on June 4, 1922, the writer had the pleasure of meeting Dr. Thijssse and learning at first hand of his efforts to save birds, which on foggy nights dash themselves against lighthouses or flutter about the lanterns until exhausted. Dr. Thijssse made his successful experiment on the tower of Brandaris Light, situated on the Island of Terschelling, lying between the Zuider Zee and the North Sea. It stands in the center of a strongly maintained migra-

tory route of birds leading south from the Scandinavian Peninsula and northwestern Russia and Germany.

As long as this light threw a steady beam, the destruction of birds was not great, but when it was modernized and a high-power flash that can be seen at a distance of 100

aided by Dr. Burdet, hit upon a plan of erecting a series of parallel iron bars around and just below the light. Here bewildered birds perch and find safety until they can again get their bearings or daylight comes to their rescue. So commodious are these perches that they can give a total seating



DR. JAC. THIJSSE, OF HOLLAND

Dr. Thijsse invented the first practical device for saving the lives of bewildered birds at lighthouses

Photographed by T. Gilbert Pearson

miles was installed the destruction of bird-life became tremendous. The tower is about 200 feet high and stands in the midst of a village well populated with cats, dogs, and bird-eating human inhabitants, who gathered rich harvests of exhausted birds falling to the pavements on foggy nights.

After various experiments, Dr. Thijsse,

capacity of 30,000 birds. Dr. Burdet estimates that he actually saw in the neighborhood of 22,000 birds roosting here at one time. It is interesting further to note that Owls and even Falcons frequently come here at night and catch the birds, but by means of the perches the loss of life has been reduced to a minimum. Among the species



BRANDARIS LIGHTHOUSE

On the Island of Terschelling, north of the Zuider Zee, Holland, where the first system of perches was erected for birds attracted to the light
 Photographed by Dr. A. Burdet



A DETAIL SHOWING PORTION OF BIRD PERCHES ERECTED NEAR THE TOP OF
 BRANDARIS LIGHTHOUSE

Photographed by Dr. A. Burdet

attracted to the tower are innumerable Starlings, Larks, Thrushes, Gulls, Terns and Oystercatchers. In addition there is a great variety of other land and shore-bird species.

The perches or 'ladders' are erected twice a year and remain up for two months during the period of migration.

Similar Efforts in England

It is but natural that the wonderful success attending this experiment should attract the attention of the officers of the Royal Society for the Protection of Birds just across the English Channel. At the annual meeting of that Society held in London on March 6, 1913, Lord Curzon headed a special fund with a gift of £25 for the purpose of equipping some of the lighthouses in England. Many other members of the Society at once contributed. The *London Times* took up the campaign and materially aided in the collection of funds which soon amounted to the very useful sum of £500.

In the annual report of the Royal Society for 1921 there appears this paragraph:

Bird-rests at Lighthouses

"The perches at the four lighthouses equipped by the Society were erected as usual for the spring and autumn migrations,

and abundant evidence was again given of their value to bewildered little migrants. The lighthouses at present furnished with the rests are the Caskets, St. Catharine's, Spurn Point, and South Bishop. The Committee will be glad to add Bardsey Lighthouse (Carnarvon), when funds permit. This year the apparatus at Spurn has had to be renewed at a cost of £70, owing to the destruction wrought by heavy storms."

In America perches for birds have never been erected on any of the lighthouses, but it is a question that has frequently been discussed. Some months ago the National Association of Audubon Societies took up the matter with the Lighthouse Board in Washington. Inquiry was made as to whether the Government would look with favor on the idea of the National Association equipping one lighthouse with perches as an experiment. In reply we were advised that the Biological Survey of the Department of Agriculture is at the present time engaged in making a thorough investigation of the extent of the destruction of birds by American lighthouses. It will probably be a year before the Survey will make its final report, after which we shall be in position to know what further consideration of the subject is needed.

GUARDING THE GREAT TEXAS HERONRY

The great colony of Reddish Egrets discovered in Laguna Madre, Texas, in 1920, was taken under the care of the Association the past season. The work of guarding these extremely rare and interesting birds was entrusted to R. D. Camp, of Brownsville. It may be recalled that the Texas Legislature at its last session enacted a law authorizing the Commissioner of Public Lands to lease to our Association, without cost for a period of fifty years, various islands in these waters, whose vast bird-life had been brought to the attention of the public by our field work in that territory. While the necessary legal arrangements for taking title of the Islands have not yet been completed, we felt the necessity of immediately beginning the work of protecting the birds.

It was the southern group of these Laguna Madre Islands that Mr. Camp undertook to protect. These consist of Green Island, Moro Island, and the Three Islands. His report of the season's work is of more than usual interest, and this means is taken to present it to the members of the Association.

"I arrived at Green Island on May 20, in a sailboat, towing the houseboat and skiff, having made the trip from Point Isabel in seven and one-half hours. The houseboat was an old affair with a cabin 10 by 20 feet built on two small barges. I rented it for the season for \$15. The deal proved very satisfactory as it gave me a dry and semi-comfortable place to camp, away from the mosquitoes which were troublesome at times.

"During my stay in the Laguna a number



A YOUNG WHOOPING CRANE

Owing to continuous persecution by gunners, the Whooping Crane has become one of the rarest birds in North America. This photograph was made by Miss E. Margaret Estlin, at Kerrobert, Saskatchewan, in the summer of 1913. Adult birds were seen by her in this neighborhood as late as the autumn of 1921

of naturalists visited me for study. Prof. Alvin Cahn and two assistants came on June 3, and stayed about ten days, during which they studied the life habits of Egrets and Herons, and took about 250 photographs of them. Mr. and Mrs. G. Finlay Simmons, the former being an instructor in biology at the University of Texas at Austin, came about the middle of June, and worked among the birds and fish of the surrounding district for two weeks. Prof. B. C. Tharp, botanist

by camping on land, which camp would have to be built during the heat of nesting, I used the houseboat. I am convinced the proper way to handle the Island is to put up a small permanent wooden shack, say 12 by 16 feet, with a porch across one side, building this in the fall or winter. Such a building could be used for a great many years and would not, in my judgment, bother the birds. The first cost of a structure of this sort should not be over \$250. It would be the base of



ONE OF THE SIGNS RECENTLY ERECTED ON GREEN ISLAND, TEXAS, BY R. D. CAMP REPRESENTING THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

of the University of Texas, spent six days, from June 23, studying and collecting the flora of Green Island. Mr. Jack Specht, field man for the Fox Film Service, arrived on June 27 and took about 550 feet of film for educational screen work. Also a number of local fishermen parties visited the camp for a few hours each. On only two occasions did I have to correct trespassers who attempted to land on the Island with guns; each time these parties waded over from Moro Island.

"Conditions on Green Island, the territory principally watched, were far more satisfactory this year than formerly. Due to my fear of the possibility of disturbing the birds

action for all the territory from Point Isabel to Topo Bay.

The Grackle Menace

"By far the greatest menace to the rookery at Green Island is the destroying of the fresh eggs of the Herons and Egrets by the Great-tailed Grackles. This destruction, however, was greatly overcome this year, but not to the extent possible, as I clearly determined by conditions observed while on the ground. Last year, by a careful census and estimate, there were over 5,000 shells of devoured fresh eggs, mostly Reddish Egret and Louisiana Heron, on the ground at one time. This was so greatly reduced the present

year that I estimate not over 300 eggs destroyed. Another year, by proper steps being taken, I am confident the trouble can be entirely eliminated.

"My recommendations for combating the Grackles are, after this year's experience, to be on the ground between April 20 to 25 and start a systematic campaign of destroying the nests of the Grackles, and in this way discourage their using the Island for breeding. I find that practically all the eggs destroyed by Grackles are fresh, and are eaten during the period of incubation of the Grackle, as after the young are out, the parent birds bring food from the mainland. My campaign of eradication this year consisted of traps, poison, and shooting, the latter finally being the only successful means, as, in a very short time, the Grackles evaded both traps and poison. In some cases I found the Grackles destroying and eating their own eggs. There was no further necessity for watching the Grackles after June 30 this year, and if the case is properly handled by early action hereafter, I think the Island can be cleaned up by the middle of May.

"The increase in bird-life on Green Island was noticeable, particularly that of the Ward's Heron and Snowy Egret; there were also more Reddish Egrets in evidence this year. Only a very few cases of natural death of young birds were seen, and in this respect the conditions differed from those of previous years. But once did a coyote visit the Island this season, and then to stay only a day.

"High-water conditions about the Laguna this year caused the destruction of many bird colonies. The Rio Grande was on a rampage and vast quantities of fresh water came into the Laguna via the Arroyo Colorado, causing a rise of over two feet, which submerged practically all the reefs and flats on which the Terns and Gulls were nesting. At one time there were no bars in sight at either end of Green Island.

The Bird Population

"Birds breeding on Green Island during the season of 1922 had nests in about the number given below:

	Nests
Reddish Egret, approximately . .	1800
Louisiana Heron, approximately . .	1200

Ward's Heron, approximately	300
Black-crowned Night Heron, ap- proximately	150
Snowy Egret, approximately	20
Least Tern, approximately	60
Black Skimmer	1
Black Vulture	1
Texas Woodpecker	3
Curved-billed Thrasher	4
Grey-tailed Cardinal	4
Golden-fronted Woodpecker	1

In addition to the above there were, perhaps, 300 nests of the Great-tailed Grackle, a majority of which were destroyed or the birds shot. I estimated 50 of the white phase of the Reddish Egrets on Green Island this season, also saw at one time 17 of the large White Egrets, but I did not find them breeding. I did, however, see a number of nests of the Reddish Egrets with downy young in the white phase.

Many more of the Reddish Egrets were nesting on the ground this year than formerly—there were hundreds of them. Large flocks of Roseate Spoonbills visited the section at various times, once 177 being counted, and there were also many White Pelicans.

"On Moro Island there were about 50 nests of Least Terns, and possibly 12 of the Black Skimmer on the bar at the north end of the Island. Most of these were destroyed by high water. Also one nest each of Ward's Heron, Black-crowned Night Heron, and Black Vulture were found on the high part of the Island. On a bar just north of Three Islands I found a colony of Black Skimmers with sixty-odd nests, with eggs and many ready for eggs, but the entire colony was submerged and destroyed by high water later. Deer Island, on which a large colony of Gulls and Terns nested last year, was entirely under water and I rode over it in my boat.

"I visited a great deal of the surrounding country and Islands, as far north as Topo Bay, but was unable to find any other rookeries or to find any Spoonbills or Pelicans breeding. Large flocks of Sooty Terns were noticed, and in one case there were at least 17 young birds, but I was unable to find whether they were breeding in the Laguna.

Respectfully submitted,

(Signed) R. D. CAMP."



1. BALTIMORE ORIOLE, ADULT MALE

2. BALTIMORE ORIOLE, ADULT FEMALE

3. BALTIMORE ORIOLE, IMMATURE FEMALE